# EXHIBIT 3

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### 1. ENGAGEMENT AND SUMMARY OF CONCLUSIONS

- 1. I was engaged by Stephen M. Doniger Esq of Doniger/Burroughs to determine if there is evidence of plagiarism of the Freeman Manuscripts in the published Wolff series called *Crave* (including *Crave*, *Crush*, *Covet* and *Court*). I was provided six Freeman Manuscripts (*Blue Moon Rising* 2010, 2011, and *Masque* 2012, 2013, 2014, 2016), the *Crave* series as well as two prepublication versions of *Crave* (120 page and 147 page versions), and ten published Young Adult (YA) novels in the paranormal romance genre, the same genre as the Freeman Manuscripts and the Crave series.
- 2. I have analyzed the similarity between the Freeman Manuscripts and the Crave series and used the ten YA novels as a baseline for expected similarity. There is evidence of plagiarism of the Freeman Manuscripts in the Crave series, at each of the three levels of plagiaristic strategy: **copy-paste**, **mosaic** and **conceptual plagiarism**. Using standard methods for detecting plagiarism in forensic linguistics, I found evidence of each type of plagiarism in the Crave series, relating these books to the Freeman Manuscripts.
- 3. In particular, I considered over 700 examples of **6-words-in-a-row exact**matches between the Tracy Wolff ("TW") documents and the Lynne Freeman

<sup>1</sup> John Olsson. 2004. First Ediition. And 2008. Second Edition. Forensic Linguistics. New York: Continuum. Olsson (2008) describes both copy-paste and mosaic plagiarism and how plagiarists work to hide source material. Malcolm Coulthard and Alison Johnson. 2007. An Introduction to Forensic Linguistics: Language in Evidence. New York: Routledge. Coulthard and Johnson (2007) provide discussion of both copy-paste and mosaic plagiarism and refer to John's work for the method based on lexical overlap, related in this report to conceptual plagiarism. Alison Johnson. 1997. Textual kidnapping: a case of plagiarism among three student texts. Forensic Linguistics. Volume 4 ii, pp 210-25. Johnson presents a method of lexical overlap rates on keywords which is similar to the one used in this report. The only difference between Johnson's method and the method used in this report has to do with additional statistical analysis that I present. Gerald McMenamin. 2002. Forensic Linguistics: Advances in Forensic Stylistics. Boca Raton, FL: CRC Press. McMenamin mentions the six-words-in-a-row standard.

- "LF") manuscripts. Since the consensus in forensic linguistics is that 6-words-inrow indicates textual borrowing, these 700 examples are evidence of **copy-paste plagiarism**, the least sophisticated method of taking material from a source.
- 4. Further, there are many examples of phrases and sentences pairs, one from the Freeman Manuscripts and one from the TW Crave series, which are related to each other through the typical methods of mosaic plagiarism: substitution, insertion, deletion and permutation. Mosaic plagiarism is more difficult to detect than copy-paste, but it is detected through paraphrase recognition, i.e. substitution, insertion, deletion and permutation of the source material. These four methods of mosaic plagiarism transform source material, through paraphrase, in ways that disguise the source, especially if the source is not in the public domain. Mosaic plagiarism —paraphrastic disguise—is detected when the source and plagiarism are side by side. Since mosaic plagiarism typically affects sentences and phrases, the effect of mosaic plagiarism is localized.
- 5. Given that the authors in this case are well-educated and sophisticated, I focused my attention on the most sophisticated plagiaristic strategy, conceptual plagiarism. Conceptual plagiarism uses the same paraphrastic disguises as mosaic plagiarism, i.e. substitution, insertion, deletion, and permutation, but it relies heavily on insertion and permutation. In conceptual plagiarism, insertion of material not in the source makes the plagiarism more difficult to detect, since one might not see the forest for the trees. Olsson (2008:105) notes that plagiarists often add or insert material in order to disguise the theft: Olsson describes this as padding the text. Further, permuting the sequences of items in the source makes the plagiarism difficult to detect, since discombobulating the order of events or merging events can make side by side comparison very difficult.
- 6. The way to overcome the "forest for the trees" effect of conceptual plagiarism is to focus on what does match, instead of extraneous insertions and permutations that function to obscure or distance the matches. In order to focus on what does match, a baseline is required, because some matches may

- simply be the requirements of a genre or topic. In conceptual plagiarism, the matches far exceed the baseline expectations.
- 7. The analysis in this report shows that non-plagiarizing baseline novels can be similar to the Freeman Manuscripts because both the baseline novels and the Freeman Manuscripts share the same keywords but different because the baseline novels and the Freeman Manuscripts use the keywords in different ways, with different sets of companion words. So, non-plagiarizing novels are not inculpated simply because conceptual plagiarism detection requires a focus on what is similar, i.e. the keywords. Instead, non-plagiarizing novels are exculpated precisely because the similarity of keywords does not extend to the similarity of the (the companion words that collocate with the keyword). But plagiarizing novels are inculpated because the level of matching exceeds what any of the non-plagiarizing novels illustrate.
- 8. I conducted two independent statistical tests of conceptual plagiarism, the most sophisticated plagiaristic strategy, and found that the amount of similarity between the Freeman Manuscripts and the Crave series, in relation to the baseline novels, cannot be explained as chance: instead, the statistical analysis shows that the similarity between the Freeman Manuscripts and the Crave series is so far from the baseline that it can only be explained by deliberate re-use of material in the Freeman Manuscripts.
- 9. In particular, I selected 35 keywords based on the similarities of plot, character and setting outlined in the complaint. I raised and answered the question, do these 35 keywords operate in the Freeman Manuscripts and the Crave series in such a way that makes these two sets of documents more closely related to each other than to any of the baseline documents, or do these 35 keywords operate in such a way that one would expect from the baseline documents, so that the relationship between the Freeman Manuscripts and the Crave series is not special at all?
- 10. I calculated the way that 35 keywords operate in the Freeman Manuscripts (LF), the Crave series (TW) and the baseline novels (AN, AP, BF, CC, KG, LK, LS, MS, RM, and SM). Each keyword is central to a *lexical cluster, the words that*

co-occur with it, or the keyword's collocations. One adage in linguistics is that you know a word by the company it keeps, that is, you know a word by the words that appear with it, or the lexical cluster around a keyword, (in linguistics terminology, collocations)<sup>2</sup>. One way to measure similarity is to determine how much overlap there is between lexical clusters of the same keyword in different texts. For example, by measuring the lexical clusters of a keyword like *Alaska*, I (or any linguist) can determine if the lexical clusters for *Alaska* are populated with a lot of the same words in authors LF, TW, and the baseline authors, i.e. lexical cluster overlap, or not.

- 11. When lexical clusters from different authors have *high overlap*, the concept of the keyword in those authors is similar: the authors are thinking and using the keyword is a similar way because they put the keyword with similar companion words.
- 12. When lexical clusters from different authors have *low (or no) overlap*, the concept of the keyword in those authors is different: the authors are thinking and using the keyword in different ways because they use different sets of companion words with the keyword.
- 13. The lexical clusters of these 35 keywords clearly cluster LF and TW together, because the words in the lexical clusters have high overlap; i.e. LF and TW use a lot of the same words when they use a keyword. Further, the lexical clusters of the 35 keywords differentiate LF and TW from the ten baseline novelists, because the amount of overlap amongst the ten baseline authors, LF and TW is consistently low; i.e., the baseline authors do not use a lot of the same words that LF and TW use with keywords. In fact, the lexical cluster overlap between LF and TW is consistently far greater than the baseline overlaps, where the baseline overlaps provide the expectation of how much overlap we should expect from different, independent authors authoring novels in the same genre. I conducted two

<sup>&</sup>lt;sup>2</sup> Firth J.R. 1957. Studies in linguistic analysis. Oxford: Blackwell Press.

- independent statistical tests to measure how likely the overlaps between LF and TW are.
- 14. The first test uses the mean of overlaps expected from the baseline authors. Then the overlap of TW with LF is compared to this mean. *Is the overlap of TW with LF below, at or above this baseline mean?* If the overlap of TW with LF is very high, it will be, in technical terms, one or two standard deviations or distances above the average overlap of the baseline authors with LF. The more standard deviations, or the farther the distance, an overlap rate is away from the baseline average, the more unlikely it is to happen simply by chance. The amount of overlap between the LF and TW lexical clusters –i.e. the amount of borrowing from LF—is consistently so great that the chance this could occur randomly is at least *two standard deviations above the baseline expectation* (the mean of the baseline authors), or far enough away from the mean to be statistically significant.
- 15. The second test uses the binomial probability which calculates how often an event can be expected over a series of tests. In this case, the tests are the 35 keywords. For each keyword, the baseline authors and TW are ranked as to who has the highest overlap with LF. TW has the highest lexical overlap with LF, far greater than the baseline authors do, in 31 of the 35 keyword clusters. *How likely is it that TW will have the highest overlap with LF in 31 of the 35 tests, just as a random chance?* Using the binomial probability, for TW to be the most similar to LF, in 31 of the 35 tests, is expected by chance only fifteen in ten million times (p = .0000015). Since this chance is so astronomically miniscule, we can rule out chance as the explanation for the striking similarity between the keyword lexical clusters in LF and TW.
- 16. I confirmed these results using another way to compare the lexical overlaps shown by LF and TW and the lexical overlaps of the baseline authors. In this other way, I used document vectors to turn the overlapping word lists into a list of numbers, and then used cosine distance to get a cosine similarity score. Again, the baselines authors' overlaps with LF were each strikingly different from the overlaps of TW with LF. All of these results are presented in detail below.

- 17. Due to the statistical results of the keyword lexical cluster analysis for conceptual plagiarism, as well as other indications of plagiarism at less sophisticated levels of copy-paste and mosaic plagiarism, I conclude that the LF and TW documents are strikingly similar to such a degree that chance cannot explain the level of similarity, but re-use of material can explain the similarity.
- 18. Section 2 describes my qualifications, Section 3 explains the three levels of plagiaristic strategy and methods of detection, while Section 4 describes the results of applying methods of plagiarism detection in this case.

# 2. QUALIFICATIONS

- 19. I earned my AB Magna cum laude in Ancient Greek and English at Bryn Mawr College (Bryn Mawr, PA) in 1978. I earned my MEd. in Psychology of Reading at the University of Delaware in 1981. For my MEd work, I specialized in diagnosis of reading disorders and cognitive processes in reading. I earned my AM and PhD in Linguistics at Brown University in 1985 and 1988, respectively. For my PhD work, I specialized in three areas of linguistics:
  - a. **syntax**: the study of universal principles of sentence structure),
  - b. **language change**: historical and social forces which cause language to change over time and place and
  - c. computational linguistics: a combination of computer science and linguistics which is the technology underlying Google search, Microsoft Word and current developments such as ChatGPT, QuillBot paraphrasing tool, Spinbot for text rewriting, and other text spinning software.

    Computational linguistics creates computer software to perform language-related services, such as sorting through a pile of documents to find ones that relate to a specific topic, fix spelling errors, translate from one language to another, diagram sentences, synonymize a text, and generate text on topics requested by a user. As a computational linguist, I have worked on teams that developed spell checkers, grammar checkers and question-answering systems and I have developed software for forensic

- text analysis, coining the terms forensic computational linguistics and computational forensic linguistics to describe my work.
- 20. I have taught graduate and undergraduate courses in syntax, language change, psychology of literacy and computational linguistics. I have taught English composition and literature to middle and high school students and undergraduates.
- 21. I began my work in forensic linguistics in 1992. Forensic linguistics takes the principles and techniques from the science of linguistics and applies them to questions that are relevant to criminal investigations, legal proceedings and other related inquiries.
- 22. Three years after I began my work in forensic linguistics, I was awarded a Visiting Research Fellowship at the National Institute of Justice (the "NIJ"), of the U.S. Department of Justice, where I worked from 1995 to 1998. The NIJ is the research, development and evaluation agency of the U.S. Department of Justice, and is dedicated to improving knowledge and understanding of crime and justice through science. It also provides funding and leadership for the development of forensic science. My work during my fellowship at the NIJ resulted in the introduction of quantitative research methodologies relying on pattern recognition to the forensic sciences and was the first instance in which the U.S. government funded research in forensic linguistics. At the request of the NIJ, I founded the Institute for Linguistic Evidence, Inc. in 1998. The institute is a non-profit research organization, of which I am Executive Director, and focuses on forensic linguistics.
- 23. I founded ALIAS Technology LLC in 2007 to provide consulting services and software for forensic linguistic analysis and computational linguistics to law enforcement personnel, attorneys, private individuals and corporations. ALIAS Technology has been consulted by investigators and attorneys in the U.S., Canada, Africa, Australia and Asia for civil investigations involving employment disputes, threat assessments, breaches of fiduciary duties, defamation, trademark infringement, authorship identification, and suicide note assessment. I have also been consulted by law enforcement agencies and attorneys in the U.S., Canada

- and Australia in connection with investigations of murder, suicide, rape, kidnapping, and other major crimes.
- 24. My testimony as a forensic linguist has been admitted into evidence in U.S. state, military and Federal courts. My CV submitted herewith contains a list of all cases in which I have testified at trial or depositon as an expert over the past 4 years.
- 25. My testimony has been excluded once in a copyright infringement case (Mowry v Viacom, 2003) due to the novelty of the method I was using; the method (known as cladistics or phylogenetic reconstruction) became standard practice in linguistics soon thereafter when a textbook was published about it. I was not involved in the textbook. I am not using the cladistics method in this case and I have not used it since the Mowry decision.
- 26. My testimony was excluded once in a patent infringement case (Eloqui Voice Systems LLC v Nuance Communications Inc, 2018) when another linguist on the case who used a subjective, qualitative method was excluded even though I was not deposed about the quantitative method I used, so the baby was thrown out with the bathwater.
- 27. In all other cases, my testimony has been admitted as scientific evidence. In the last four years, since 2019,
  - a. I testified in US Air Force v Lt Col Keithen Washington (2019) in Federal Military Court, at the Hauser hearing for evidence admissibility. Court ruled that my testimony and evidence was fully admissible. Opposing expert accepted and agreed with my analysis, providing a Guglio statement. The Hauser standard is the military equivalent of the Daubert standard. I did not testify in trial because the Court granted a mistrial due to the perjury of a government witness.
  - b. I testified in O'Hara v Liberty Rural Fire District et al in California State Court as well as in the 402 evidence hearing before trial. Court ruled that my testimony and evidence was fully admissible.

- 28. I serve on the Advisory Board for the Linguistics Department of Montclair State University (Montclair, New Jersey) and have been an adjunct professor of linguistics at the University of Delaware (Georgetown campus). I am an adjunct professor of forensic science at George Washington University (Washington, DC). I taught the first course in forensic linguistics at the Linguistic Society of America Linguistics Summer Institute (akat he LSA Summer Institute) at the University of Michigan in the summer of 2013, and taught again at the LSA Summer Institute at the University of Chicago in the summer of 2015. The LSA Summer Institute draws students and faculty from all over the world; my classes have been large (40-60 attendees) and populated by graduate students and faculty from many countries. I co-taught the language and law course at the LSA Summer Institute at the University of California at Davis in the summer of 2019.
- 29. I am a Fellow of the American Academy of Forensic Sciences (Engineering and Applied sciences section), a lifetime member of Linguistic Society of America, a member of the Association for Computing Machinery, a member of Institute of Electrical and Electronics Engineers, an associate member of the American Bar Association (criminal justice and science and technology sections), a founding member of the International Language and Law Association, and a founding member of TALE: The Association for Linguistic Evidence, the only association in forensic linguistics with eligibility standards for membership. I am currently the Chair of the Engineering and Applied Sciences Section of the American Academy of Forensic Sciences.
- 30. I have published ten peer-reviewed<sup>3</sup> articles on forensic linguistic methods in academic and professional journals, contributed seven book chapters on forensic

<sup>&</sup>lt;sup>3</sup> In academic scholarship and science, peer review is the process by which papers are evaluated for publication. Peer review is the gold standard of evaluation in science, and it is also a legal factor for scientific evidence, since peer review indicates that a community of scientists have understood a method and have recognized its value to the scientific community such that the method should be made public. As shown on my CV, I have sought out and attained successful peer review from statisticians, computer scientists, linguists, and attorneys through submitting abstracts to professional conferences and by submitting articles and book chapters to academic publications. Scientific publications such as conference abstracts, journal articles, book chapters and books are accepted for publication after a process called "Blind Peer Review." Blind Peer Review follows these steps.

<sup>•</sup> Step 1: a scholar submits a manuscript for review to an editor or chairperson of a review committee. The submission must not contain any information which identifies the scholar as the author of the manuscript.

linguistics and two law review articles concerning forensic linguistic techniques. My CV contains a list of all publications I have authoried over the last 10 years.

31. My first article addressing research protocols in forensic linguistics and authorship identification was published in 1997.<sup>4</sup> I then published in 2001 the results of testing different methods of authorship identification on "ground truth" data, demonstrating the reliability of syntactic structures and syntactically-classified punctuation, in an article that continues to be cited frequently.<sup>5</sup> Another article that I published in 2005, and has been cited over 200 times, details my methodology for authorship identification.<sup>6</sup> I reported continued experimental results in a book chapter in 2007.<sup>7</sup> I have also written book chapters

<sup>•</sup> Step 2: The editor or chairperson determines at least two other scholars who have expertise to evaluate the manuscript for scholarly contribution to the field and acceptable methodology. A scholarly contribution to the field may include an analysis of new data using a current method, a presentation of a new method of analysis, a review of methods, etc. Accepted methodology uses concepts and analytical techniques which are already in use in the field; an acceptable methodology is recognized by other experts in the field. The reviewers' evaluation usually includes comments to the editor, and anonymous comments to the author. The process is called "blind" because the reviewers cannot see who the author is, and the author cannot see who the reviewers are.

<sup>•</sup> Step 3: The editor or chairperson contacts the reviewers, asking them to review the manuscript and make one of four possible decisions. These decisions are:

o (1) publish the manuscript as it is;

o (2) publish with minor revisions of the manuscript;

o (3) publish with major revisions of the manuscript;

o (4) do not publish the manuscript.

<sup>•</sup> Step 4: The editor or chairperson collates the reviews, tabulating the decisions and makes the final decision based on the reviewers' evaluation. The editor or chairperson provides reviewer comments for the author to the author.

<sup>•</sup> Step 5: If the decision among the reviewers is to publish, and the author meets all criteria for revisions as requested, the manuscript is published. A successful peer review results in a publication or acceptance as a speaker at a professional conference.

<sup>&</sup>lt;sup>4</sup> Carole E. Chaski, *Who Wrote It? Steps Toward a Science of Author Identification*, NATIONAL INSTITUTE OF JUSTICE JOURNAL, September 1997. According to Google Scholar, it has been cited 56 times. Google Scholar is a search engine for academic publications and patents which tracks the number of times an article or patent has been referenced by others. The citations are an indication of influence in a field or topic.

<sup>&</sup>lt;sup>5</sup> Carole E. Chaski, *Empirical Evaluations of Language-Based Author Identification Techniques*, 8 INTERNATIONAL JOURNAL OF SPEECH, LANGUAGE & LAW 1 (2001). According to Google Scholar, it has been cited 247 times.

<sup>&</sup>lt;sup>6</sup> Carole E. Chaski, *Who's at the Keyboard? Authorship Attribution in Digital Evidence Investigations*, INTERNATIONAL JOURNAL OF DIGITAL EVIDENCE, Spring 2005. According to Google Scholar, it has been cited 270 times.

Carole E. Chaski, *The Keyboard Dilemma and Author Identification*, in ADVANCES IN DIGITAL FORENSICS III, Suject Shinoi and Philip Craiger, eds., New York: Springer (2007).

that have appeared in a linguistics textbook<sup>8</sup> and professional books for attorneys, linguists and forensic scientists.<sup>9</sup> My law review articles have detailed the research paradigm for forensic linguistics that I use, in order to demonstrate to attorneys the viability of, and standards for, forensic linguistic evidence.<sup>10</sup>

- 32. In the last ten years, since 2013, I have published
  - a. One (1) book chapter in Solan and Tiersma, *The Oxford Handbook of Language and Law*, Oxford University Press, (2013);
  - b. Four (4) articles in peer-reviewed academic journals (2013, 2013, 2014, 2017);
  - c. Two (2) articles in peer-reviewed trade publications (2014, 2014), see footnotes
  - d. Forty-six (46) peer-reviewed abstracts at academic conferences in the US, Canada, South America, Europe, the Middle East, Africa and Asia (2013—2023), excluding keynote and invited lectures at universities and conferences.
- 33. I have been invited to lecture at law schools (Yale University Law School (2006), the School of Law at the Chungbuk National University in South Korea (October 2014), Northwestern University Law School (2015)); at universities (Bonn University (2006), the National Police University of China in Shenyang, People's Republic of China (November 2014), Mary Washington University Kakava Lecture Series (April 2015), the Universidad de Murcia, Spain (May 2015), Iowa State University Center for Statistical Analysis in Forensic Examination (May

Carole E. Chaski, *Linguistics as Forensic Science: The Case of Author Identification*, in LANGUAGE IN THE REAL WORLD, Susan Behrens and Judith A. Parker, eds., New York: Routledge (2010).

<sup>&</sup>lt;sup>9</sup> Carole E. Chaski, *Author Identification in the Forensic Setting*, in *The Oxford Handbook of Language and Law*, Lawrence Solan and Peter Tiersma, eds., New York: Oxford University Press (2013); Carole E. Chaski, *Forensic Linguistics, Author Identification and Admissibility*, in FOUNDATIONS OF FORENSIC SCIENCE AND LAW: INVESTIGATIVE APPLICATIONS IN CRIMINAL, CIVIL AND FAMILY JUSTICE, Cyril Wecht and John Rago, eds., Boca Raton: CRC Press (2005).

Carole E. Chaski, Best Practices and Admissibility of Forensic Author Identification, 21 JOURNAL OF LAW & POLICY 333, 350, 356 (2013); Carole E. Chaski, Cases in the Four Corners of Forensic Linguistics. SCIENCE, TECHNOLOGY AND LAW, Volume 5: 1 (2014). Chungbuk National University School of Law, Law Research Institute.

2023), and at law enforcement agencies around the world (the United States Secret Service (2010), the Garda Civil de Murcia, Spain (Detective Division), Spain, (May 2015), the FBI National Academy Class on Intelligence Analysis (August 2015), and the U.S. Department of Defense Intelligence Analysis Meeting (September 2015)).

34. I have presented my research in forensic linguistics at national and international conferences, with peer-review and/or publication of my abstracts, more than 65 times. Specifically, I have presented my work to forensic scientists at the American Academy of Forensic Sciences Engineering Sciences and Questioned Documents Sections, 11 the International Workshop on Digital Forensics 12 and the International Association of Forensic Sciences; to statisticians at the Classification Society of North America; 13 to attorneys at the American Academy of Forensic Sciences Jurisprudence Section 14 and the American Bar Association Criminal Justice Section; and to linguists at the Linguistic Society of America 15, Societas Linguistica Europae, and the International Congress of Linguists. I have also presented my research forensic linguistics conferences such as the International Association of Forensic Linguists, the International Conference on Language and Law in Wales, 16 the International Language and Law Association conferences at Dusseldorf and Freiburg, and TALE: The Association for Linguistic Evidence. I have presented on syntax and language variation at U.S.

<sup>&</sup>quot;Comparing Statistical and Machine Learning Techniques in Author Identification and Verification," American Academy of Forensic Sciences, Engineering Sciences Section (2015) (with Gary Holness, PhD and Michael Harris, PhD); "A Validated Admissible, Computational Method for Detecting Electronic Authorship," American Academy of Forensic Sciences, Engineering Sciences Section (2007); "An Automated Language-Based Authorship System for Document Authentication," American Academy of Forensic Sciences, Questioned Documents Section (1998).

<sup>&</sup>lt;sup>12</sup> "The Keyboard Dilemma and Forensic Author Identification," International Workshop on Digital Forensics (IFIP-Digital Evidence) (2007).

<sup>&</sup>quot;Discriminant Function Analysis in Forensic Authorship Attribution," Joint Meeting of the Classification Society of North America and The Interface, Washington University, St. Louis, Missouri (2005).

<sup>&</sup>lt;sup>14</sup> "Facebook and the Faceless: Authorship in an Electronic Society," American Academy of Forensic Sciences, Jurisprudence Section (2011) (with Alice Lustre, Esq.).

<sup>&</sup>quot;Electronic Parsing for Idiolectal Features in Suspect Documents," Linguistic Society of America Annual Winter Meeting (1997); "Re Forensic Linguistics: Five Data Handling Issues," Linguistic Society of America Annual Meeting (2013).

<sup>&</sup>quot;Recent Validation Results for the Syntactic Analysis Method for Author Identification," International Conference on Language and Law (2004).

- linguistics conferences held at Stanford University, the University of Chicago, the University of North Carolina-Chapel Hill, the University of Pennsylvania, the University of Minnesota, the University of Iowa, the University of Wisconsin-Milwaukee and at other venues, as detailed in my Curriculum Vitae.
- 35. I am the founding editor of LESLI: LINGUISTIC EVIDENCE IN SECURITY, LAW AND INTELLIGENCE, and an associate editor of THE LINGUISTICS JOURNAL, LANGUAGE AND LAW and the INTERNATIONAL JOURNAL OF LAW, LANGUAGE AND DISCOURSE. I have also reviewed articles for these journals, as well as for the INTERNATIONAL JOURNAL OF SPEECH, LANGUAGE AND LAW; LAW AND SOCIETY; FOUNDATIONS OF INFORMATION RETRIEVAL; INTERNATIONAL JOURNAL OF DIGITAL EVIDENCE; CORTEX; and JOURNAL OF FORENSIC SCIENCES.
- 36. I have developed and deployed software named ALIAS: AUTOMATED LINGUISTIC IDENTIFICATION AND ASSESSMENT SYSTEM, which has been web-accessible for users since 2009. I have trained technical support linguists at ALIAS Technology, agents in federal, state, and local law enforcement, and private investigators on forensic linguistics and ALIAS. In addition to its use in casework at ALIAS Technology, ALIAS is used by corporate security teams and researchers in cybersecurity, ethics and linguistics. In 2023, I am training forensic scientists in two international venues, the International Academy of Forensic Sciences in Sydney, Australia and InterForensics in Brasilia, Brazil as well as a European team from Belgium and Luxembourg.
- 37. ALIAS provides multiple methods in forensic linguistics, with specific application to identification (author and language); textual similarity (plagiarism, relationships between texts or intertextuality); textual types (threats, suicide notes, predatory chats) and linguistic profiling (native language, dialect, educational level).
- 38. I have been consulted or provided reports regarding textual similarity in several cases.
  - a. In Naftogaz v Gazprom (2019), I demonstrated that opposing expert's claims of copy-paste plagiarism in the judicial award was greatly

- exaggerated, and the tribunal's borrowing from the parties' briefs affected less than 10% of the ruling.
- b. In Vantage v Edgenuity (2018), I showed that quiz questions were more similar than a baseline, demonstrating copyright infringement.
- c. In Collins v Jackson Public School District (2017), I demonstrated that the judicial ruling was not dependent on Jackson Public School District's briefs, as claimed by Collins, even though Collins was my client. My report was cited by the judge in his ruling against Collins.
- d. In a Human Resources Investigation for Genessee Wyoming Railroad (2016), I demonstrated that incident reports were far closer to each other than could be expected against a baseline, with the result that the company was spared litigation for wrongful termination.
- e. In Koopmeiners vs Care.Com (2016), I showed the relatedness of ostensibly independent documents; the case settled.
- f. In Chevron vs. Donziger (2014), I served as a consulting expert. In this capacity, I read and reported on the strengths and weaknesses of all the linguists' reports on both sides of the case. I verified (using ALIAS) that there was copy-paste plagiarism in a judicial ruling, as one of the experts claimed, as well as evidence of machine translation which none of the experts recognized.
- g. In Theranos v Fuisz (2014), I demonstrated that Theranos' claims of patent infringement were not supported by textual similarity, even though Theranos was my client; while this case settled, in later investigations about Theranos, it was proven that one of its strategies for raising funds was patent claims.
- h. In Chipotle Mexican Grill v Bolle (2005) I demonstrated that training materials were stolen from Chipotle due to striking similarity, similarity far above the expected baseline; the case settled after Bolle admitted theft of intellectual property in deposition.

- In Art Science Research Laboratory Investigation (2002), I verified John Olsson's report on plagiarism (evidenced by all three strategies described below) in Langewiesche's *American Ground* regarding the World Trade Center attack.
- 39. I am being compensated for my work in this matter at the private individual rate of US\$ 250 per hour. My compensation does not depend in any way on the results of my analysis or the outcome of this matter. Please see Annex 1 for my CV.

## 3. METHODOLOGY

40. In this section I provide an overview of (i) the documentary data in this case, and (ii) plagiarism strategies and methods of detecting plagiarism, explaining the linguistic analysis, with examples from the case data.

## 3.1. Documentary Data In This Case

- 41. In addition to documentary data listed below, which I have analysed, I have also reviewed the complaint and supporting material related to the complaint.
- 42. Table 1 lists the documents which I received for examination in this case. Six Freeman manuscripts are the target documents, four Wolff documents are the suspect documents, and ten documents from ten other authors are the baseline documents.

Table 1: Documents In This Case

Author	Document Title	Words	Chapters	Author Initials
TARGET				
Lynne Freeman	Blue Moon Rising 2010	135,105	49	LF
Lynne Freeman	Blue Moon Rising 2011	156,851	54	LF
Lynne Freeman	Masqued 2012	143,299	57	LF

Lynne Freeman	Masqued 2013 April	119,428	46	LF
Lynne Freeman	Masqued 2014	91,583	50	LF
Lynne Freeman	Masqued 2016	25,682	12	LF
		671,948	268	
SUSPECT			The state of the s	
Tracy Wolff	Crave	168,518	69	TV
Tracy Wolff	Crush	209,393	128	TV
Tracy Wolff	Covet	243,056	164	TV
Tracy Wolff	Court	263,173	178	TV
		884,140	539	
BASELINE				
Alyson Noel	Evermore The Immortals 2009	82,786	38	AN
Aprilynne Pike	Wings 2009	68,093	25	AI
Becca Fitzpatrick	Hush Hush Saga Book 1 2009	93,401	31	BF
Cassandra Clare	City of Bones The Mortal Instruments 2007	139,406	23	CC
Kami Garcia	Beautiful Creatures 2009	156,132	35	KO
Lauren Kate	Fallen 2009	110,297	22	LK
LJ Smith	The Vampire Diaries The Awakening 1991	54,675	67	LS

Shiver The	97,904	68	MS
Wolves of			
Mercy Falls			
2009			
Vampire	83,977	24	RM
Academy 2007			
The Twilight	119,419	25	SM
Saga 2005			
	1,006,090	358	
	Wolves of Mercy Falls 2009  Vampire Academy 2007  The Twilight	Wolves of Mercy Falls 2009  Vampire Academy 2007  The Twilight Saga 2005  119,419	Wolves of Mercy Falls 2009  Vampire 83,977 24  Academy 2007  The Twilight 119,419 25  Saga 2005

- 43. Before analyzing the data, I prepared each document so that it could be analyzed computationally.
- 44. Two pre-analysis steps are standard practice in corpus and computational linguistics: scrubbing and lemmatizing.
- 45. **Scrubbing** a text means removing document formatting that could interfere with a linguistic analysis. For instance, page numbers, book and chapter titles, copyright information, dedications and so forth are all removed. Further, all extraneous spaces (including invisible spacing characters) are removed. This version of the text is saved as a scrubbed version. For certain procedures, punctuation can interfere, so punctuation is also removed and a version of the text is saved as a no-punctuation version.
- 46. **Lemmatizing** a text means converting every word to its base **lemma** (or dictionary) form. Words such as *was, is, were, been* are all converted to the lemma *be*. ALIAS TATTLER implements several lemmatizers (Basis Rosette, NLTK, Simplemma, SpaCy, and Stanza) which are all used in industry. I have studied the various strengths and weaknesses of these lemmatizers. <sup>17</sup> I selected SpaCy as the most appropriate lemmatizer for this case, given the size and

<sup>&</sup>lt;sup>17</sup> Carole E Chaski, Angela Almela and Pascual Cantos. 2023. Testing Basic Toolkits for Forensic Text Analysis: Lemmatizers. Engineering & Applied Sciences Section, Winter Meeting, Orlando, Florida. AMERICAN ACADEMY OF FORENSIC SCIENCES ANNUAL PROCEEDINGS.

- language patterns of the documents. Information about SpaCy can be found at <a href="https://spacy.io/">https://spacy.io/</a>.
- 47. After lemmatizing the text, I checked each output to insure its quality. The lemmatized version is saved with punctuation and without punctuation, in running text and in list format in ALIAS.
- 48. In addition to scrubbing and lemmatizing, ALIAS TATTLER also performs word class extraction. In English and most languages, there are two word classes: content words and function words. Content words provide referential content; i.e. these words refer to entities and states of being. Function words provide syntactic information about how words function together but do not supply content information. In the sentence (a) below, the content words are bolded and the function words are underlined.
  - a. The judge ruled about the case, and he made a good decision.
- 49. The content words **judge**, **ruled**, **case**, **made**, **good**, **decision** refer to entities and states of being: the content words are *what the sentence is about*.
- 50. The function words the, about, and, he, a do not refer directly to any entity or state of being; even the pronoun he only refers to the judge an an entity indirectly since it refers directly to the word judge. Rather, the function words signify functional relationships between entities and states of being.
- 51. ALIAS TATTLER extracts the function words from a document, and saves these in several formats (running text, list and list of unique words). ALIAS TATTLER extracts the content words from a document and saves these also in several format (running text, list and list of unique words). These text versions are useful in later analysis when a method requires using content words only. For text similarity, content words are crucial.

## 3.2. Overview Of Three Plagiarism Strategies

52. There are three levels of plagiaristic strategies, or three ways that uncredited taking of intellectual property happens. These three levels are:

- 53. <u>Copy-paste or direct plagiarism of the uncredited source.</u> Entire sentences or paragraphs are copied and pasted into a new document, without credit to the source. This is the most unsophisticated type of plagiarism.
- 54. Mosaic or patch plagiarism with four main types of transformations of the material from the uncredited source. This is more sophisticated than copy-paste plagiarism, since it requires the ability to paraphrase, but also shows intentionality in seeking to disguise the material taken from the uncredited source. The typical disguises of mosaic plagiarism are substitution, insertion, deletion and permutation of the source material. Mosaic or patch plagiarism is legitimate in literary devices such as satire and allusion, where everyone knows the source of the material which is borrowed because it is already in the public domain. However, mosaic or patch plagiarism is illegitimate plagiarism when the material is borrowed from an unpublished, uncredited source which is not in the public domain; it cannot be counted as satire or allusion because no one can understand the reference to something that is not in the public domain. Only the author of the plagiarized material and the plagiarist can get the inside joke because the joke truly is inside a very small circle of people, not the general public. Mosaic or patch plagiarism is local or brief, in the same way that copy-paste plagiarism is: there is a short path between the source material and its plagiarized presentation.
- 55. Conceptual plagiarism in which ideas are taken from the uncredited source. The ideas can be transformed using techniques that mosaic plagiarism uses, but the path between the source material and its plagiarized presentation can be much longer than in mosaic plagiarism, spread out over novels or several articles. Conceptual plagiarism disguises source material using the same techniques as mosaic plagiarism, i.e. substitution, insertion, deletion and permutation, but it relies heavily on insertion and permutation. Inserting a lot of differences does not refute the presence of similarities that are higher than baserate expectations. Permuting the sequence of events or merging events does not refute the source of the events in uncredited material, even though it makes side by side comparisons difficult to do because it is hard to see the forest for the trees with a lot of inserted or permuted material.

#### 3.2. Linguistic Methods for Detecting Plagiarism, With Examples from This Case

56. There are three methods for detecting plagiarism that correlate to these three strategies for plagiarizing.

## 3.2.1. Detection of Copy-Paste Plagiarism

- 57. The main way of detecting copy-paste plagiarism is known as **overlapping n-grams**. An n-gram is a **specific number of words in a row**, where the number of words is indicated by the n. I prefer to call this **n words in a row**. The idea that language can be modeled and measured by n-grams was introduced in the 1940's. <sup>18</sup> The n-gram language model is still used today in large-language models developed by OpenAI, Google, and other computational linguistics companies.
- 58. For detecting overlapping words-in-a-row, first the two documents to be compared are split into segments of n-words-in-a-row so that each document becomes a list of n-words-in-a-row. Then the lists of n-words-in-a-row from each document are compared for matches, or overlaps. The number of overlaps is less important than the fact that overlaps exist, because any amount of plagiarism still signifies plagiarism. But an inordinate amount of overlaps does indicate an inordinate amount of reuse of the original document. The processes of segmenting a document into words-in-a-row and finding matches are tedious, so software is typically used for this process. ALIAS TATTLER includes a procedure for segmenting a document into n-words-in-a-row, where the n can be from two to twelve, and finding matches.
- 59. It is generally accepted in forensic linguistics that detection of copy-paste plagiarism requires that at least 6-words-in-a-row, exactly the same, are found in the source material and the plagiarism.<sup>19</sup> This is because 2-, 3-, 4- and 5- words-

Claude Shannon (1948). *A Mathematical Theory of Communication*. THE BELL SYSTEM TECHNICAL JOURNAL, Vol 27, pp. 379-423, 623-565, July, October 1948. In 1949 this was published as a book by Claude Shannon and Warren Weaver, retitled THE MATHEMATICAL THEORY OF COMMUNICATION, Urbana: Univdersity of Illinois Press.

Olsson, John. (2008) Second Edition. FORENSIC LINGUISTICS. New York: Continuum. See also references in footnote 1.

- in-a-row are so commonplace that they overlap even when two authors are not plagiarizing, but simply writing about the same topic.
- 60. Two, three, four or five words in a row, however, can be used for detecting key phrases in a document, and the rarity of those key phrases can also be used in plagiarism detection.

## 3.2.1.1. Examples of Copy-Paste Plagiarism in This Case

- 61. A preliminary study of 6-words-in-a-row segments in the TW and LF documents shows a large number of matches. I reviewed 700 matches that do not occur in the ten baseline documents. This study used a scrubbed, no-punctuation version.
- 62. Because the authors in this case are sophisticated and well-educated, I chose to focus on more sophisticated plagiaristic strategies. However, I would like to finish the 6-words-in-a-row overlapping n-grams analysis if I am permitted to do so by the Court.

## 3.2.2. Detection of Mosaic Plagiarism

- 63. The main way of detecting mosaic or patch plagiarism is known as **paraphrase recognition**. Paraphrase recognition has long been used in linguistics, and was the basis for transformational grammar in the 1950's and 1960's, upon which current linguistic theory, esspecially syntax, relies.<sup>20</sup>
- 64. A paraphrase is a re-wording of a sentence. Paraphrase techniques include **substitution, insertion, deletion and permutation**. An original sentence can be paraphrastically transformed, for example,
  - a. by substituting a synonym for a word in the original,
  - b. by inserting additional words into the original,
  - c. by deleting some words of the original, and
  - d. by changing the sequence, or permuting, of words in the original.

Noam Chomsky, SYNTACTIC STRUCTURES, 's-Gravenhage: Mouton & Co., N.V. (1957); Noam Chomsky, ASPECTS OF THE THEORY OF SYNTAX, Cambridge, MA: MIT Press (1965).

- 65. Notice that mosaic plagiarism cannot be detected by the words-in-a-row method, because paraphrasing discombobulates the original words in a row. Instead, paraphrase recognition is required to compare the original with the plagiarized version to determine if substitution, insertion, deletion or permutation relates the original and the plagiarized version.
- 66. Mosaic plagiarism can be detected using software that creates a concordance. A concordance is a list of all words in a document. For each word, its context to the left (before the word) and to the right (after the word) are provided. The window into the left and right contexts can sometimes be set, in different concordance software, to different lengths so that smaller or larger contexts can be examined. Because the context of the word can be examined, the examiner can note if words have been inserted, deleted or changed in sequence from the original version. Concordance software can find synonyms that have been substituted when the rest of the context has stayed the same. ALIAS TATTLER includes the ability to make concordances with contexts from six to twelve words to the right and left of each word in a document.

## 3.2.2.1. Examples of Mosaic Plagiarism in This Case

67. In the 120 and 147 page early versions of TW Crave,

This is the same format that is in LF Blue Moon Rising 2010 and following manuscripts.

- 68. However, in the published version of TW Crave, the chapters are titled.
- 69. These chapter titles provide many examples of mosaic plagiarism in the form of allusion. Now, there is nothing illegitimate about allusion, especially when the allusion is to something in the public domain or something that can be expected to be public knowledge. Importantly, the chapter titles do demonstrate that the TW books contain proof of the ability to perform mosaic plagiarism, through substitution, insertion, deletion and permutation. Computational linguistic software that "spins text" performs mosaic plagiarism, usually through synonymizing (i.e. substitution), insertion (especially using fillers and hedges like

kind of, close to, etc), and permutation (changing active sentences to passive sentences or vice versa or deploying topicalization to shift a topic to the start of a sentence rather than the end).

70. Table 2A lists the sixty-nine (69) TW Crave chapter titles; for those chapter titles that include allusion, the allusion and the modifications using the plagiaristic strategies of substitution, insertion and deletion are listed.

Table 2A: Examples of Mosaic Plagiarism WRT Allusions in Crave Chapter Titles

TW CRAVE CHAPTER TITLE	ALLUSION	MODIFICATION STRATEGY
00 If You're Not Living on the Edge, You're Taking Up Too Much Space		
01 Landing Is Just Throwing Yourself at the Ground and Hoping You Don't Miss		
02 Just Because You Live in a Tower Doesn't Make You a Prince		
03 Vampire Queens Aren't the Only Ones with a Nasty Bite		
04 Shining Armor Is So Last Century	Knight in Shining Armor	Deletion Knight in
05 Things Hot Pink and Harry Styles Have in Common		
06 No, I Really Don't Want to Build a Snowman		
07 Something Really Freaking Wicked This Way Comes		
08 Live and Let Die	Live and Let Live (also Bond Reference)	Substitution <i>Die</i> for <i>Live</i>
09 Even Hell Has its Factions		

10 Turns Out the Devil Wears Gucci	The Devil Wears Prada	Insertion of <i>Turns</i> Out; Substitution Gucci for Prada
11 In the Library, No One Can Hear You Scream		
12 It's All Fun and Games Until Someone Loses Their Life	It's all fun and games until someone gets hurt	Substitution loses their life for gets hurt
13 Just Bite Me	Just Kiss Me	Substitution <i>Bite</i> for <i>Kiss</i>
14 Knock, Knock, Knocking on Death's Door	Knock Knock Knocking on Heaven's Door	Substitution <i>Death's</i> for <i>Heaven's</i>
15 So Hell Actually Can Freeze Over	When Hell Freezes Over	Insertion of Actually Can
16 Sometimes Keeping Your Enemies Close Is the Only Thing that Prevents Hypothermia		
17 It's Discretion, not Diamonds, That's a Girl's Best Friend	Diamonds are a Girl's Best Friend	Insertion of Discretion Not
18 How Many Hot Guys Does it Take to Win a Snowball Fight?		
19 We Came, We Fought, I Froze	I came, I fouhgt, I conqured	Substitution We for I, Froze for Conquered
20 There's Never a Parachute Around When You Need One		
21 I Like Standing on My Own Two Feet, but Getting Swept Off Them Feels Surprisingly Good, Too		
22 Baby, It's Hot in Here	Baby It's Cold Outside, Baby It's Cold Inside	Substitution <i>Hot</i> for <i>Cold</i> , <i>In here</i> for <i>Outside</i>
23 Never Bring an Ice Cream Scoop to a Gun Fight	Never bring a knfie to a gun fight	Substitution <i>ice cream scoop</i> for <i>knife</i>
24 Waffles Are the Way to a Girl's Everything		

25 Truly, Madly, Deeply		
Bitten	Truly Madly Deeply	Insertion of Bitten
26 The Uniform Doesn't		Insertion of <i>Doesn't</i> ,
Make the Woman, But it		Substitution <i>Uniform</i>
Sure Does Bring Out the		for Clothes, Woman
Insecurities	Clothes make the man	for Man
27 Ten-Degree Weather		
Gives a Whole New		
Meaning to the Cool Kids' Table		
28 "To Be or Not to Be"		Deletion of <i>That</i> ,
Is a Question, Not a	To Be Or Not to Be that is	insertion of <i>Not a</i>
Pickup Line	the question	pickup line
•	1	Substitution
29 With Friends Like		Everyone for who,
These, Everyone Needs Hard Hats	With friends like these, who	hard hats for
Hard Hats	needs enemies	enemies
30 You Make the Earth		Substitution Shake
Shake Under My		for <i>Move</i> , Insertion
Feetand Everywhere	You Make the Earth Move	of and everywhere
Else, Too	Under MY Feet	else too
31 Big Girls Don't Cry		Insertion of unless
(Unless They Want To)	Big Girls Don't Cry	they want to
32 It's Not a Coincidence		
that Denali and Denial		
Use All the Same Letters		
33 Madonna's Not the		
Only One with a Lucky		
Star		
34 All's Fair in Love and		Substitution of
Earthquakes	All's Fair In Love and War	Earthquakes for War
35 Baked Alaska Is More		,
than Just a Yummy		
Dessert		
36 No Harm, All Foul		Substitution of <i>all</i>
·	no harm, no foul	for no
37 Don't Ask the		
Question if You Can't		
Handle the Answer		
38 Nothing Says "I Like You" Like a Fang to the		
Throat		
Tinoat		

39 There's Never a Hallucinogen Around When You Need One		
40 Be Careful What You Witch For	Be careful what you wish for	Substitution of <i>witch</i> for <i>wish</i>
41 Vampires, Dragons, and Werewolves, Oh My!	Lions, Tigers and bears oh my!	Substitution of vampires for lions, dragons for tigers and werewolves for bears
42 Good Thing Pancakes Aren't on Today's Menu		
43 What Doesn't Kill You Still Scares the Hell Out of You	What doesn't kill you makes you stronger	Substitution of still scares the hell out of you for makes you stronger
44 Sweet Home Alaska	Sweet Home Alabama	Substitution of <i>Alaska</i> for <i>Alabama</i>
45 I Always Knew There Was Fire Between Us; I Just Didn't Realize it Was Your Breath		
46 I'll Get You and Your Little Dog, Too	I'll get you and your little dog too	
47 The First Bite Is the Deepest	The first cut is the deepest	Substitution of <i>bite</i> for <i>cut</i>
48 Is That a Wooden Stake in Your Pocket or Are You Just Happy to See Me?	Is that a pistol in your pocket or are you just glad to see me?	Substitution of wooden stake for pistol
49 Eventually the World Breaks Everyone		
50 He Who Lives in Stone Towers Should Never Throw Dragons	he who lives in glass houses shouldn't throw stones	Substitition of stone towers for glass houses, dragons for stones
51 Trial by Dragon Fire 52 If You Can't Live Without Me, Why Aren't You Dead Yet?	Trial by fire	Insertion of dragon
53 If This Kiss Is Going to Start a War, it May as Well Be Worth It	the kiss that ended the war	Insertion of so if this, going to start a,

		it may was well be worth it
54 What Could Possibly Be More Interesting than Kissing Me?		
55 No Use Crying Over Spilled Tea	no use crying over spilled milk	Substitution of <i>tea</i> for <i>milk</i>
56 Vampire Girl Gone Wild	Girls gone wild	Insertion of vampire
57 Double, Double, Toil and a Whole Lot of Trouble	double double toil and trouble	Insertion of a whole lot of
58 Never Do a Trust Fall with Someone Who Can Fly		
59 Carpe Kill-Em	Carpe Diem	Substitution of <i>Kill</i> for <i>Di</i>
60 Some Call it Paranoia, But I Call it an Evil Bitch Trying to Use You as a Human Sacrifice		
61 Sticks and Stones May Break Your Bones, but Vampires Will Kill You	Sticks and stones may break your bones, but words will never kill you	Substitution of vampires for words, deletion of never
62 Where There's Smoke, There's a Dead Vampire	Where there's smoke, there's fire	Substitution of <i>a dead vampire</i> for <i>fire</i>
63 A Bite to Remember	A Kiss to Remember	Substitution of <i>Bite</i> for <i>Kiss</i>
64 All's Well that Ends with Marshmallows	All's well that ends well	Insertion of with marshmallows
65 Why Can't a Girl Just Have an Ordinary HEA These Days?		
00 She Persisted — Jaxon—		
01 You Only Think You're a Prince If You Don't Have a Tower— Jaxon—		

02 It Only Takes One Hot Vampire to Win a Snowball Fight—Jaxon—	
03 If You Want to Feel Better, Never Ask an Evil Vampire a Question— Jaxon—	

- 71. Of the sixty-nine (69) TW Crave chapter titles, thirty-seven (37) contain an allusion, and thirty-six (36) of those containing an allusion are modified with a plagiaristic strategy of substitution, insertion or deletion. A highly salient feature of the TW Crave chapter titles is the use of borrowing and modifying public knowledge. The rate for this literary device is 36 of 69 chapter titles, or 52%.
- 72. Table 2B shows how this strategy of modifying allusions continues in the TW Crave Series, with only one example from many in each book.

Table 2B: Examples of Mosaic Plagiarism WRT Allusions in Later Chapter Tiles in Series

TW Title with Allusion	Allusion in TW Chapter Title To	Modification On Allusion
Crush 110 Heeeeeeeeere's Hudson	Heeeeeeeere's Johnny	Substition of  Hudson for  Johnny
Covet 06  A Tale of Two Vegas	A Tale of Two Cities	Substition of Vegas for Cities
Court 43  Mommy Not So Dearest	Mommy Dearest	Insertion of Not So

73. Further, I examined whether the ten baselines authors use chapter titles and modify allusions in the chapter titles in the way that TW does, or differently. In the ten baseline books, there are 358 chapters (where prologue, epilogue and

chapters from the next book in the series, if included in the book are all counted as chapters). Of the ten baseline authors, only four use chapter titles (I do not include Maggie Stiefvater as the chapter titles are consistently a character name and temperature).

74. Of these four (4) authors who use chapter titles, there are 105 chapters. However, of these 105 titles chapters from four (4) baseline authors, only eight (8) chapter titles from two baseline authors contain allusion. Table 3 shows four baseline authors who title chapters, with the few examples of allusion in the title, i.e. a borrowing of something in public domain or common knowledge.

Table 3: Comparison Authors' Use of Allusions in Chapter Titles

Author Who Uses Chapter Titles	Does Title Contain Allusion?	Allusion	Any Modification On Allusion?
CC	none		-
LK	yes, three	The Lion's Den  Idle Hands  Where There's Smoke	No No
KG	yes, five	The Real Boo Radley  Marian The Librarian  The Writing On the Wall  When the Saints Go  Marching In  White Christmas	No No No No
SM	none	-	

75. In the ten (10) baseline novels, the use of allusion in chapter titles is very rare, being attested only eight (8) in 105 chapters (7.6%) or taken in regard to the entire

- baseline novels, only eight (8) chapter titles of a specific type (those containing allusion) in 358 total chapters (2.2%). The expectation of allusion in chapter titles in this genre is low, and one remarkable characteristic of the TW Crave series is the fact that allusion in chapter titles at a rate of 52% is spectacularly higher than the baseline rate of 7.6% (or 2.2%).
- 76. These examples of mosaic plagiarism in the TW chapter titles, which no one disputes are original to the TW books, are very similar to examples of mosaic plagiarism in the body of the works, where patterns of mosaic plagiarism are disputed.
- 77. In the following examples, color coding is employed to indicate the specific strategies of mosaic plagiarism that relate the source material in the Freeman Manuscripts and the related material in the TW books: Substitution (in blue), Deletion (in red), Insertion (in green), Permutation underlined
- 78. LF Blue Moon Rising 2011 and TW Crave (deletion, substitution, insertion)
  - a. He grinned... as if he knew exactly what effect he had on me
  - b. He's grinning... he knows exactly what kind of effect he's having on me
- 79. LF Blue Moon Rising 2011 and TW Crave (deletion, substitution)
  - a. winter in Alaska must be like living on the moon
  - b. [winter in] Alaska feels like [living on] the moon
- 80. LF Blue Moon Rising 2011 and TW Crave (substitution, permutations)
  - a. He brought his thumb to his lips and licked it, his gaze locked with mine
  - b. Then brings his thumb to his lips and –<u>holding</u> my gaze with his own—his thumb in his mouth and slowly sucks off the blood
- 81. LF Blue Moon Rising 2011 and TW Crave (substitution, deletion)
  - a. I wanted the ground to just open up and swallow me
  - b. I pray for the ground to open up and swallow me
- 82. LF Blue Moon Rising 2011 and TW Crave (substitution)

- a. My mouth opens and closes like a fish out of water...I struggle for air
- b. His mouth opening and closing like a fish out of water as he struggles for a decent response
- 83. LF Blue Moon Rising 2012 and TW Crave (substitution, insertion)
  - a. I'd been taken. By demons. Soul sucking demons.
  - b. How was I supposed to know that Angie was a soul-sucking demon?
  - c. Note the change in punctuation, which can foil words-in-a-row detection.
- 84. LF Blue Moon Rising 2014 and TW Crave (substitution)
  - a. The coppery tang of blood fills my mouth
  - b. The metallic taste of blood pooling in my mouth
- 85. LF Blue Moon Rising 2011 and TW Crush (substitution, permutation)
  - a. she said in a saccharine sweet voice
  - b. I keep my voice saccharine sweet
- 86. LF Blue Moon Rising 2013 and TW Covet (permutation, deletion, insertion)
  - a. <u>Word vomit</u>... I'm possessed by a wracking case of babbling, stumbling idiocy, with no control of what comes out of my mouth
  - b. The more I babble, the more stonelike Hudson's face becomes until I force myself to stop <u>vomiting words</u>
- 87. LF Blue Moon Rising 2010 and TW Court (permutation, substitution, insertion)
  - a. like a small Stonehenge
  - b. All right, Stonehenge Lite it is.
- 88. There are many more examples of mosaic plagarism provided in the complaint.

  The point I am making with these examples is that each one (as well as the others in the complaint) are prototypical of plagiaristic strategies employed in mosaic plagiarism—each one listed above show how substitution, deletion, insertion and permutation are used to disguise the original material through

**paraphrase.** The examples cannot be discounted as legitimate allusion, because the original material is not, and was not, in the public domain since it was not published, but the original material was within the domain of the publishing house.

- 89. One of the features of mosaic plagiarism, as mentioned previously, is that the distance between the source material and the paraphrased material is fairly short. The transformations are localized, and often are visible within the same sentence or clause or phrase, as shown in the examples above. This close-proximity or near-distance is why it is easy to spot the mosaic plagiarism strategies in the TW chapter titles, and why the material from the target and suspect documents can be easily related to each other. Conceptual plagiarism, as noted previously, is less localized than mosaic plagiarism, and the transformative operations of substitution, deletion, insertion and permutation are deployed at a more expansive level. For example, consider these two excerpts from LF Blue Moon Rising 2014 and TW Crave:
- 90. I start to **struggle** in earnest... I shout,
- 91. bucking and kicking against him as hard as I can.
- 92. I slam my **head** back with as much force as I can,
- 93. aiming to break his **nose**.
- 94. I **struggle** against him,
- 95. lashing out blindly with my feet...
- 96. I buck backwards for all I'm worth, head butting him.
- 97. Crack! I've hit his nose.
- 98. These excerpts provide a strong example of conceptual plagiarism, because the strikingly similar conception of the particular type of physical struggle which the

heroine endures is conveyed over several clauses, with only four key content words in common (*struggle*, *buck*, *head*, *nose*).<sup>21</sup>

## 3.2.3. Detection of Conceptual Plagiarism

- 99. The main way of detecting conceptual plagiarism is **key concept comparison**. This comparison determines whether key concepts are treated in the same way in the original and suspect documents, by examining the **keyword lexical clusters** for the key concepts. While different methods for key concept comparison differ in technical details, all of the methods for detecting conceptual plagiarism focus on examining lexical clusters, whether the lexical clusters are discovered through latent semantic indexing, transformer word vectors, or concordance collocations.<sup>22</sup>
- 100. Each keyword is central to a *lexical cluster*, the words that co-occur with it, or the keyword's collocations. One way to measure similarity is to determine how much overlap there is between lexical clusters of the same keyword in different texts.
  - a. When lexical clusters from different authors have *high overlap*, the concept of the keyword in those authors is similar: the authors are thinking

- Deerwester, S. (1988). *Improving information retrieval with latent semantic indexing*. In Proceedings of the 51st Annual Meeting of the American Society for Information Science (vol. 25, pp. 36–40).
- Hienz Dreher (2007). *Automatic Conceptual Analysis for Plagiarism Detection*, Issues in Informing Science & Information Technology (Vol 4).
- Chang, CY., Lee, SJ., Wu, CH. et al. 2021. Using word semantic concepts for plagiarism detection in text documents. INF RETRIEVAL J 24, 298–321 (2021). https://doi.org/10.1007/s10791-021-09394-4

<sup>&</sup>lt;sup>21</sup> This example is actually quite similar to an example of plagiarism provided in Coulthard and Johnson (2007:188), where keyword overlaps are dispersed with intervening material as part of the disguise as well as Olsson's analysis of plagiarism in Langewische's *American Ground* which was published by Art Science Research Laboratory at https://www.wtclivinghistory.org/project1/plagiarism-in-american-ground-langwiesche-fails-to-cite-wall-street-journal-and-la-times-journalists-exclusive-interviews/

<sup>&</sup>lt;sup>22</sup> Key concept comparison using clusters of words is well-known in plagiarism studies. In much of the current literature on plagiarism detection outside forensic linguistics, the methods are deployed for detecting academic plagiarism, deduplicating scientific literature or improving search through topic discovery. Although I am not using the particular methods described in the following three examples, I provide them merely to show that lexical clusters are a central technique for detecting text similarity from the point of view of statistics, information retrieval and conceptual plagiarism.

- and using the keyword is a similar way because they put the keyword with similar companion words.
- b. When lexical clusters from different authors have *low (or no) overlap*, the concept of the keyword in those authors is different: the authors are thinking and using the keyword in different ways because they use different sets of companion words with the keyword.
- 101. When I perform keyword lexical cluster overlap, I use ALIAS because ALIAS implements multiple text analysis algorithms and statistical procedures. Procedures for computerized text analysis are reported in basic textbooks in linguistics, e.g. Ohio State University's *Language Files*, <sup>23</sup> as well as more advanced textbooks in corpus and computational linguistics, e.g. Gries (2009), <sup>24</sup> Cantos-Gómez (2013), <sup>25</sup> and McEnery and Hardie (2012). <sup>26</sup>
- and difference between texts. This is important because, in combination with the baseline authors, it enables the method to meet the known error rate factor in the Daubert standard for scientific evidence. <sup>27</sup> In this case, the ten baseline authors, authors who could not possibly have plagiarized from the Freeman manuscripts, were consistently not identified as too similar to the Freeman manuscripts. In other words, the keyword lexical cluster overlap method does not automatically find similarity: it finds similarity where the similarity actually exists.

#### 3.1.3. Method of Conceptual Plagiarism Detection in This Case

103. I processed the documents in the following steps:

Mihalicek, V. and Wilson, C. (eds.) Department of Linguistics, The Ohio State University. (2011) LANGUAGE FILES. Columbus, OH: The Ohio State University Press. Pages. 640-641.

Gries, Stefan Th. 2009. QUANTITATIVE CORPUS LINGUISTICS WITH R: A PRACTICAL INSTRODUCTION. New York: Routledge.

Cantos Gómez, P. 2013. STATISTICAL METHODS IN LANGUAGE AND LINGUISTIC RESEARCH. Sheffield, UK: Equinox.

McEnery, T. and Hardie, A. (2012). CORPUS LINGUISTICS: METHOD, THEORY AND PRACTICE. Cambridge Textbooks in Linguistics. Cambridge: Cambridge University Press.

<sup>&</sup>lt;sup>27</sup> Daubert v. Merrell Dow Pharmaceuticals Inc., 509 U.S. 579 (1993).

- a. Using ALIAS TATTLER, I scrubbed all the documents, removing formatting information, pagination, chapter numbering and graphics.
- b. Using ALIAS TATTLER, I lemmatized all the documents, using the industrial platform SpaCy.
- c. I checked all lemmatized results to make sure that stray punctuation was removed and that odd forms were regularized.
- d. Using ALIAS TATTLER, I extracted function words from the lemmatized version of all the documents. From this I made versions of all the documents in which only lemmatized content words occur.
- e. I selected keywords based on the complaint's description of similarities between the Freeman Manuscripts and the Wolff books (Complaint pages 13-20).
- f. From this review, I had 35 words for keywords.
- g. I created lexical clusters for each of these keywords using only lemmatized content words that occur within 12 items to the right and 12 items to the left of the keyword. Since an average clause in English is about ten words, and the version has stripped out function words, the 12 words may contain the content words of about 2 clauses on either side of the keyword.
  - i. This is a very conservative approach, for two reasons.
  - ii. A 12-word context on left and right means that the other words that cluster (or collocate) with the keyword must occur with it in fairly close proximity.
  - iii. I did not include synonyms of any of the words, neither the keywords nor the companion words in the lexical cluster.
- h. Using ALIAS LexiLap, I ran searches for each keyword in each author's documents (LF, TW and the ten baseline authors). From these searches

- LexiLap saves the lexical clusters for each keyword for each author (LF, TW, and the ten baseline authors) as running text.
- For each lexical cluster's running text, LexiLap deduplicates terms so that each lexical cluster contains only one use of a term in the cluster for each author.
- j. I then ran lexical overlap comparisons between each author's use of each keyword cluster. The lexical overlap comparison counts the number of matching terms in the keyword cluster from LF and the corresponding keyword cluster in TW and the ten authors. These matching terms constitute the overlap between the authors' keyword clusters.
- k. I calculated the amount of overlap that the comparison author has with LF cluster as the number of comparison authors' matching terms divided by number of terms in the LF cluster.
  - i. This is the Author Overlap Rate.
  - ii. For each keyword, there is an Author Overlap Rate for each pair of authors, LF and TW, LF and AN, LF and AP and so forth.
- I then calculated the average overlap rate from the ten baseline authors' Author Overlap Rates, for each keyword.
  - i. This is the Overlap BaseRate.
  - Note that only the ten baseline authors are used for the Overlap BaseRate.
  - iii. Each keyword lexical cluster has its own Overlap BaseRate.
- m. I sorted the comparison authors' (TW and the ten baseline authors) Author Overlap Rates to see who had the highest Author Overlap Rate i.e. which comparison author's use of the keyword was most similar to LF.
  - i. This sort enables us to see who is closest or most similar to LF.
- n. I performed this sort for each of the keywords.

- 104. As an example, consider the keyword *fist*.
- 105. The keyword lexical cluster overlaps for TW and the ten baseline author is shown below, sorted from highest to lowest amount of overlap with LF

Table 4: Keyword [fist] Overlaps Ranked for Comparison Authors

Comparison Authors	RANKED Overlap Rates Of Comparison Authors			
Tracy Wolff	47.5			
Lauren Kate	22.16666667			
Becca Fitzpatrick	17.5			
Cassandra Clare	17.16666667			
Maggie Stiefvater	14.666666667			
Kami Garcia	13.83333333			
Stephanie Meyer	11.66666667			
Alyson Noel	6.666666667			
Aprilynne Pike	5.833333333			
∐ Smith	5			
Richelle Mead	2.666666667			

- 106. TW's rate of overlap with LF, at 47.5, is far higher than the Overlap BaseRate which is the average of the baseline authors' overlaps. For the the keyword *fist*, the Overlap BaseRate is 11.71.
- 107. Please see the attached Annex 2 for output from ALIAS LexiLap.

# 3.1.4. The Statistical Analysis in This Case

- 108. There are two ways to look at the data statistically.
- 109. First, we can ask: how far is the highest overlap rate from the expected overlap rate? For this we use the standard deviation statistic.
- 110. Second, we can ask: how likely is it that TW would have the most similar (i.e. highest ranking) overlap in the tests? For this we use the binomial probabilty statistic.

# **Standard Deviation Statistic**

- 111. For each keyword, all of the ten baseline authors had a rate of overlapping with LF. These individual Author Overlap Rates are averaged to get an average for how much overlap we can expect from ten different authors writing in the same genre.
- 112. From the average (the Overlap BaseRate), I used Excel to calculate the standard deviation. Standard deviation measures the amount of variation or dispersion in a dataset. In this use, it measures how much the ten baseline author's vary from the mean of their overlaps with LF.
- 113. Using the standard deviation, I calculated 1 and 2 standard deviations below and above the Overlap BaseRate. This range tells us how far an Author Overlap Rate is from the Overlap BaseRate. In the example of the keyword *fist*, the Overlap BaseRate is 11.71 and the standard deviation is 6.43. This means that an overlap rate of 11.71 plus 6.43 = 18.15 is within one 1 standard deviation from the mean.
- 114. For 2 standard deviations above the Overlap BaseRate, the comparison author would have to have an overlap rate with LF of 24.58. Two standard deviations above a mean is significant statistically.
- 115. Even if a comparison author had an overlap rate of 24.58, because this rate is 2 standard deviations above the expected rate, the chance of this occurring just randomly is very slim (a p value for two standard deviations above the mean is usually about 1 in a thousand).
- 116. Note that, for the keyword *fist*, TW's overlap rate is 47.5, which is more than 5 standard deviations higher than the Overlap BaseRate. In order to get near TW's overlap rate of 47.5, I have to add the standard deviation 6.43 five times to the Average Overlap rate of 11.71 to get 43.89 (or five standard deviations above the mean) and that is sstill a bit lower than TW's overlap rate.
- 117. The lexical overlap between LF and TW is not coincidental or random, because the chance of it just simply happening is too rare. Since LF material was

not published and not in the public domain, the overlap cannot be considered merely a tactic of literary allusion: literary allusion is only legitimate when everyone has access to the material which is alluded to.

118. Table 5 lists each keyword and the results of the lexical overlap analysis. From left to right, for each keyword, the Overlap BaseRate is reported. (This is the average overlap rate from the ten baseline novelists). The standard deviation (measure of dispersion among the ten baseline novelist) is reported. Then the rate for one standard deviation and two standard deviations is shown: this allows us to evaluate whether the highest ranking overlap rate is statistically significant by being far away from the average baserate. The last two columns show the author who had the highest ranking overlap rate for the keyword, along with the authors's overlap rate.

# Highest Rank (Most Overlap with LF's lexical cluster for Keyword)

- Table 5 shows how often TW is in the highest ranking spot, i.e. how often TW is most similar to LF. The highest ranking spot is colored yellow. If there is a tie or a close call, the other author is colored orange.
- 120. Note that TW occupies the highest ranking spot, i.e. is closer to LF more than any of the other authors, in 31 of 35 keywords. I include the tie with Kami Garcia on the keyword *book* and do not count TW as having the highest rank because TW has a tie with Kami Garcia.

# **Standard Deviations (Overlap Rate Significantly Higher than the BaseRate)**

- 121. Table 5 also shows how often TW's overlap rate is higher than 1 standard deviation or 2 standard deviations from the Overlap BaseRate. The cells shaded in blue show where TW's overlap rate falls in terms of 1 or 2 standard deviations above the expected (average) rate.
- 122. TW's Overlap Rate is consistently in the 2 (or more) standard deviations range above the expected rate. Of the 35 keywords, only 4 times does TW's Overlap Rate fall between 1 and 2 standard deviations above the mean, rather than at or higher than 2 standard deviations above the mean.

**Table 5: Comparison Authors Ranked by Highest Author Overlap Rate** 

Keyword	Lexical Overlap BaseRate based on 10 Baseline Authors	Lexical Overlap BaseRate Standard Deviation	Positive 1 SD above baserate	Positive 2 SD above baserate	Highest Ranking Comparison Author(s)	Highest Overlap Rate for Keyword
accident	12.69	6.18	18.88	25.06	Tracy Wolff	26.75
Alaska	0.80	1.77	2.56	4.33	Tracy Wolff	47.30
alien	3.52	4.37	7.89	12.25	Tracy Wolff	19.55
aurora	0.00	0.00	0.00	0.00	Tracy Wolff	31.67
blood	19.31	8.24	27.56	35.80	Tracy Wolff	59.33
book	27.45	9.68	37.13	46.81	Tracy Wolff	47.01
			1		Kami Garcia	47.01
buck	2.83	5.03	7.87	12.90	Tracy Wolff	28.33
Diego	0.48	1.51	1.98	3.49	Tracy Wolff	76.19
doorway	13.61	6.06	19.67	25.75	Tracy Wolff	24.84
dragon	1.87	3.17	5.04	8.20	Tracy Wolff	72.66
duck	13.78	8.78	22.57	31.57	Tracy Wolff	45.65
fang	4.70	6.18	10.89	17.08	Tracy Wolff	55.19
fist	11.71	6.43	18.15	24.58	Tracy Wolff	47.50
grin	22.13	27.20	49.33	76.54	Stephanie Meyer	96.13
					Tracy Wolff	56.86
herbal	0.20	0.64	0.84	1.48	Tracy Wolff	5.05
jean	16.61	5.25	21.89	27.12	Tracy Wolff	25.46
kiss	17.01	4.89	21.91	26.81	Tracy Wolff	47.76
monster	9.22	8.12	17.34	25.47	Tracy Wolff	55.94
moon	9.03	8.83	17.86	26.69	Kami Garcia	30.24
					Tracy Wolff	20.77
mutation	0.00	0.00	0.00	0.00	Tracy Wolff	14.81
northern	0.81	1.34	2.15	3.50	Tracy Wolff	16.89
protector	0.79	1.67	2.47	4.14	Tracy Wolff	16.93
queen	6.44	7.62	14.06	21.69	Tracy Wolff	53.74
selfish	9.88	8.36	18.24	26.60	Tracy Wolff	33.33
stab	9.40	4.92	14.33	19.25	Tracy Wolff	18.69
Stonehenge	0.91	2.87	3.78	6.66	Tracy Wolff	14.55
tea	5.98	6.00	11.98	17.98	Tracy Wolff	38.85
teacher	13.64	5.50	19.15	24.66	Tracy Wolff	41.73
tree	25.44	9.64	35.08	44.73	Tracy Wolff	50.37
vampire	9.63	11.95	21.59	33.54	Tracy Wolff	62.34
waggle	0.80	1.72	2.53	4.25	Tracy Wolff	20.28
werewolf	4.73	9.49	16.22	25.72	Tracy Wolff	39.35

wink	6.69	4.96	11.66	16.63	Tracy Wolff	46.61
witch	6.01	8.20	14.21	22.41	Tracy Wolff	54.27
wolf	8.94	15.32	24.26	39.58	Maggie Stiefvater	48.37
	1 = = 1				Tracy Wolff	41.74

# **Binomial Probability Statistic**

- 123. In 31 of 35 keyword clusters, as shown in Table 5, TW had the highest Author Overlap Rate. In other words, TW uses the keywords in ways that are more similar to LF than any of the other baseline author.
- 124. The binomial probability shows how often an event can be expected over a series of tests. In this case, the tests are the 35 keywords. For each keyword, the baseline authors and TW are ranked as to who has the highest overlap with LF. TW has the highest lexical overlap with LF, far greater than the baseline authors do, in 31 of the 35 keyword clusters. How likely is it that TW will have the highest overlap with LF in 31 of the 35 tests, just as a random chance?
- 125. Using the binomial probability, for TW to be the most similar to LF, in 31 of the 35 tests, is expected by chance only fifteen in ten million times (p = .0000015). Since this chance is so astronomically miniscule, we can rule out chance as the explanation for the striking similarity between the keyword lexical clusters in LF and TW.
- Suppose that we remove the aurora test, since none of the baseline authors use the word. Then, in 31 of 34 tests, TW has the highest overlap rate with LF. But still the chance of getting 31 of 34 top spots—i.e. highest similarity—is only 35 in hundred million times (p = 0.00000035).
- 127. Suppose that we remove any keywords if less than half of the baseline authors used it. That move reduces the number of keywords to 24. TW still has the highest ranking spot in 21 of the keywords. Again, the chance of getting 21 out of 24 top spots—i.e. highest similarity—is only twelve in hundred thousand times (p = 0.00012).
- 128. So even applying as much benefit of the doubt as possible, TW consistently is the most similar to LF, and the chance of this extreme level of consistently being most similar to LF is simply too slim to explain the similarity.

Instead the statistically defensible position is that TW copied LF works, especially with regard to conceptual plagiarism.

# **Confirmation Using Document Vector Measurement**

- Although overlap rate is reported in the literature from forensic linguistics, such as Olsson (2008), Johnson (1997) and Coulthard and Johnson (2007), another way of measuring the similarity between texts has been developed in computational linguistics in the last few years. This measurement is known as vector space, word embeddings or vector embedddings. Vector space has become a standard method in computational linguistics for comparing sets of words to each other. Essentially, the vector space model of language is to input words and output numbers that characterize the words' features in large language datasets. There are numerous types and implementations of vector word embeddings. One well-established method is FLAIR, which includes the possibility of getting vector representations at the word, sentence and document level; see <a href="https://huggingface.co/flair">https://huggingface.co/flair</a>. Because FLAIR offers a document-level vector, I selected it as a way to measure the overlaps. FLAIR is implemented in ALIAS.
- 130. An important property of vector representation of documents is that vectors from different documents can be compared to each other. A standard way of comparing vectors is to use the cosine distance statistic. The cosine procedure measures how similar two vectors are. When two vectors are completely the same, the cosine similarity score is 1. When two vectors are different, the cosine similarity score is close to 0 or negative.
- over GloVe embeddings) the overlapping words in LF and TW. This produced a vector, or a numerical representation of the LF\*TW overlap. I then fed into FLAIR the overlapping words in LF and each baseline author, consecutively. This produced 10 vectors representing the lexical overlap of LF\*AN, LF\*AP, LF\*BF, LF\*CC, LF\*KG, LF\*LK, LF\*LS, LF\*MS, LF\*RM and LF\*SM.
- With two vectors, vector one representing the LF\*TW overlap, and vector 2 representing LF\*BaselineAuthor overlap, I used cosine distance to measure the

similarity of the LF\*TW overlaps to the LF\*BaselineAuthor overlaps. The question here is:

is the lexical clsuter overlap between LF and TW just the same as the lexical cluster overlaps between LF and the baseline novelists,

or is the lexical cluster overlap between LF and TW –the amount of borrowing from LF—really different freom what can be expected from the baseline novels?

- 133. For each of the 35 keyword, the LF\*BaselineAuthor cosine similarity scores are close to zero or negative, demonstrating that the ten baseline authors even when they are using the same keyword—are using the keywords in very different ways from the Freeman Manuscripts and from the TW Crave Series. Not one of the baseline authors's overlaps with LF has a similar vector measurement to the LF\*TW overlaps. The overlaps between the Freeman Manuscripts and the TW Crave series are uniquely different from the baseline.
- 134. See Annex 3 for the results from ALIAS LexiLap using FLAIR and cosine similarity.

# 4. **RESULTS**

135. Based on these empirical results using standard procedures for detecting plagiarism, I conclude that it is extremely likely that the TW Crave series plagiarize the Freeman Manuscripts. The plagiarism takes place at the three levels of plagiarism: copy-paste, mosaic and conceptual, and has been found using standard methods of plagiarism detection. Statistically speaking, it is virtually impossible that the two works could have been independently created in light of my findings above.

Date: 10 May 2023 Signature: Carole Charle PWD

Annex 1: Chaski Curriculum Vitae

# 1

# **CAROLE E. CHASKI, Ph.D.**

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Executive Director President/CEO

Institute for Linguistic Evidence, Inc.

ALIAS Technology LLC
TIN: 23-2967296

TIN: 26-0262141

www.LinguisticEvidence.org www.aliastechnology.com

#### **PRIMARY SKILLS:**

- Renowned ability to explain complex, technical material in simple, clear ways
- Pioneering research
- Thorough investigation using empirically-validated Standard Operating Protocols
- Honest evaluation that guides stakeholders of forensic linguistic evidence

#### **EDUCATION:**

Ph.D. in Linguistics. Department of Cognitive and Linguistic Sciences,

Brown University, Providence, RI. 1988.

Specialties: Syntax, Computational Linguistics, Language Change

A.M. in Linguistics. Brown University, Providence, RI. 1985.

Specialties: Computational Linguistics, Phonology.

Summer Institute. Linguistic Society of America,

University of Maryland, College Park, MD. 1982.

Courses in Neurolinguistics and Syntax.

M.Ed. in Reading. University of Delaware, Newark, DE. 1981.

Specialties: Diagnostic Testing and Remediation.

A.B. magna cum laude in Ancient Greek and English.

Bryn Mawr College, Bryn Mawr, PA. 1978.

Great Books Program. St. John's College, Annapolis, MD. 1973-75.

High School Diploma with honors. Severn School, Severna Park, MD. 1973.

#### **CERTIFICATION:**

Diplomate of International Board of Forensic Engineering Sciences, 2023-2028.

#### SOFTWARE DEVELOPED AND DEPLOYED:

# ALIAS: Automated Linguistic Identification and Assessment System 1997—

Task-specific modules include Automated (ALI), Interactive for Examiners (ALEX) and Interactive for Linguists (ALISTAIR), with access tied to level of training:

# **ALIAS ALISTAIR modules:**

SynAID: Syntactic Author IDentification

Profiler: Linguistic Indicators of Demographic Profile

#### **ALIAS ALEX modules:**

S-QUAL: Suicide Note Thematic Assessment T-QUAL: Threat Assessment Theme Assessment TATTLER: Multi-lingual Text Analysis Tools

QSynAID: Quick SynAID

Profiler2: Linguistic Capacity Assessment

#### **ALIAS ALI modules:**

UniAIDE: Unicode Character Author Identity Estimator (all languages in Unicode) C#AIDE: Character Ngram Author Identity Estimator (all languages in Unicode)

InterTexter: Inter-relationships among texts (n-gram method, all languages in Unicode)

SNARE: Suicide Note Classification

ThreatAssess: Threatening Communication Classification and Ranking WISER1: Witness Statement Assessment for Veracity and Deception

# ALIAS TATTLER: Text Analysis Tools Toward Linguistic Evidence Research 2014--

Forensic text analysis and data management system

Basic analysis: English, Spanish, German, Dutch, Italian, Russian, Korean, Chinese,

Arabic, Farsi, Hebrew

Advanced analysis: English and Spanish

#### **ILER: Innovative Linguistic Evidence Research** 2012--

Software for designing and conducting forensic linguistic experiments online, obtaining vetted data from known users, with IRB approval

# **LEGLER: LEGal Linguistic Evidence Rulings 2013--**

Legal rulings and cases about linguistic evidence in the United States organized and annotated for both scientific and legal issues, from the 1800's to present

# SCALER: SCientific Articles for Linguistic Evidence Research 2013--

Scientific research library organized and annotated for empirical work in linguistic evidence hypothesis generation and experimental design

# TRAINING SEMINARS TAUGHT:

Institute for Linguistic Evidence, Georgetown, DE

Online: Web\_ALIAS (since 2009, to selected law enforcement officers) Onsite: Using Computational Linguistics to Solve Crimes (since 2009) Onsite: ILE Summer Workshop (attendees from US and Spain)- 2014

Onsite: ILE Software Training (attendees from Australia, Pakistan, Spain and USA) -2018

Chungbuk National University, Chungbuk, South Korea -2014 National Police University of China, Shenyang, China -2014 University of Murcia, Murcia, Spain -2015, 2017 University of Alicante, Alicante, Spain -2017 National White Collar Crime Center, USA -2020

# FORENSIC LINGUISTICS CONSULTING:

This does not include any cases under confidentiality/non-disclosure agreements and ongoing cases in which I am expected to testify. Such cases include corporate, law enforcement, investigative agencies and private individual investigations.

#### 2022.

Agahi et al v Kelly and Kelly, (Federal, Arizona) [In progress]

Defense Attorney Todd Feltus and Sarah Humble.

Rebuttal Report for Daubert Motion regarding plaintiff expert report's use of subjective and hypothetical "ordinary reader" rather than standard linguistics & psychology of reading

#### 2021.

Medagoda DeSilva v DeSilva. (Federal, Oklahoma)

Defense Attorney Gregory Meier and RhyLee Wynn.

Rebuttal Report for Daubert Motion regarding Stylistics; the plaintiff stylistics expert was withdrawn; Case settled before the scheduled Daubert hearing.

O'Hara v. Liberty Rural Fire District et al. (State, California)

Plaintiff Attorney Robert E Thurbon

402 Hearing for evidence admissibility (Frye); Court ruled that testimony and evidence fully admitted, using ALIAS SynAID method

De Angelis v. Sirmey et al. (Canada)

SCBC Vancouver Registry No. S171068 Plaintiff Attorney William E Knutson, Q.C. Rebuttal Report regarding Stylistics.

Internal Affairs Investigation, Virginia Beach Police Department (State, Virginia)

Capt. Clark,

Audio analysis of body cam evidence.

#### 2020.

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# Anoka County v Sheriff Richard Duncan (State, Minnesota)

Plaintiff Attorney Wade Kish

Authorship identification using ALIAS SynAID method; defendant took plea.

# Mihok v Armitage (Family Court, California)

Defense Attorney Jeffrey Cowan

Authorship identification using ALIAS SynAID method; summary judgment in favor of defense prior to my testimony

#### 2019.

United States Air Force v. Lt Col. Keithen Washington (Federal, Military)

Defense Attorney Capt Ryan Brunson; Craig Stafford and (ret) General Jeff Arnold Hauser hearing for evidence admissibility: Court ruled that testimony and evidence fully admitted, using ALIAS SynAID method

Opposing expert accepted and agreed with my analysis; Guglio

# IBCB Insurance investigation (British Columbia, Canada)

In house counsel Scott MacFarlane
Authorship identification using SynAID

# Naftogaz v Gazprom

Defense Attorney DLA Piper Moscow, DLA Piper London, Roschier Stockholm Authorship identification using SynAID; review of other experts' methods and reports Case settled

Daoist Traditions School of Chinese Medicine Personnel Investigation (Asheville, NC, USA)

Authorship identification related to personnel decision

Mohanadass Partnership Judicial Ruling Investigation (Kuala Lumpur, Malaysia)

Authorship identification of judicial rulings, using SynAID method

#### 2018.

Eloqui Voice Systems LLC v. Nuance Communications Inc (California)
Plaintiff attorney J. Curt Edmondson Esq, Edmondson Law Office
Case involving relatedness of texts for patent infringement.

# Vantage v Edgenuity. (Pennsylvania)

Defense attorney Jim Goggin Esq, Verrill Dana LLP Relatedness of texts for copyright infringement analysis. Case settled.

Bellino Military Suicide Investigation. (Federal, Military)

Plaintiff attorney Will M. Helixon, Law Office of Will M Helixon Authenticity of alleged suicide note.

# St Charles Parish vs Bell. (State, Louisiana)

Authorship Peer Review of Stylistics ("sociolinguist") Expert
Opposing expert was withdrawn the night before the scheduled Daubert hearing scheduled.

# 2017.

#### Appeal.

The Russian Federation v. Veteran Petroleum Limited. C/09/477160/ HA ZA 15-1 The Russian Federation v. Yukos Universal Limited. C/09/477162/ HA ZA 15-2 The Russian Federation v. Hulley Enterprises Limited. C/09/481619/ HA ZA 15-112

The Hague District Court, The Netherlands.

Appellate attorneys Niuscha Bassiri and Rob Meijer.

Hanotiau & van den Berg

Case involving authorship of Arbitration Awards.

# Neborsky v. "Democracy Dames."

Plaintiff Attorney Deborah Bucknam Esq.

Case involving authorship of anonymous online posts and mailed letters.

# **Human Resources Investigation**

Bottom Line.

Tom Gallitano, Esq., Conn Kavanaugh Rosenthal Peisch & Ford LLP Case involving authorship of anonymous online posts and mailed letters.

# Juvenile Investigation

Frank Marsh, Intelligence Analyst

Assessment of letter for level of threat using ALIAS ThreatAssess.

# Makino v. Bleich

Plaintiff attorney Donald Kula Esq, Perkins Coie LLP Case involving authorship of emails.

#### Collins v. Jackson Public School District.

Plaintiff attorney Imhotep Alkabanu-lan, Esq.

Case involving authorship of judicial ruling and relatedness of texts.

# Insurance investigation.

Sharice Marootian Esq, Law Offices of Abdulaziz, Grossbart & Rudman

#### 2016.

The Russian Federation v. Veteran Petroleum Limited. C/09/477160/ HA ZA 15-1

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The Russian Federation v. Yukos Universal Limited. C/09/477162/ HA ZA 15-2 The Russian Federation v. Hulley Enterprises Limited. C/09/481619/ HA ZA 15-112

The Hague District Court, The Netherlands.

Plaintiff Attorneys Nathaniel Jedrey and Lawrence Friedman.

Case involving authorship of Arbitration Awards.

# Homicide Investigation.

Det. Vernon Siders, Davidsonville Police Department, Davidsonville, NC.

# Kamenski v. Wellington School District et al.

Plaintiff Attorney Stuart Torch Esq, Elfvin, Klingshirn, Royer & Torch LLC Case involving authorship of anonymous letter to employer.

Sworn report.

Case settled.

# Human Resources Investigation.

Paul Bourzikas, Vice-President, Genessee Wyoming Railroad.

Case involving relatedness of texts given as incident reports.

# Human Resources Investigation.

Evan Jenkins, Nine9 Agency.

Case involving authorship identification of anonymous posts and letters.

# Koopmeiners vs Care.Com.

Plaintiff attorney Gail C Groy Esq., Axley Brynelson LLP

Case involving expected capacity for comprehension of documents and document relatedness to other documents.

Case settled.

# Ruzton v Irizarry

Defense attorney Phil Martin Esq, Kastner Kim LLP

Case involving authorship of anonymous letter.

Case settled.

# Human Resources Investigation.

Giles Stanley Esq, SERMO.

Case involving Glassdoor posts.

#### 2015.

State of Florida vs. Augustine Bollo.

Assistant District Attorney K. Harper.

Case involving confession to sexual assault of minor.

Report reviewing forensic stylist's report.

Defense's forensic stylistics expert was withdrawn.

# Mylan Trademark.

Defense Attorney Lara Holzman.

Psycholinguistic analysis of word recognition strategies related to mark similarity.

Case settled.

#### State of Tennessee vs. Jenelle Potter.

Defense Attorney Cameron Hyder, Law Office of Cameron L. Hyder

Case involving authorship of electronic texts.

Report reviewing forensic stylist's report.

State's forensic stylistics expert excluded after Frye hearing.

#### State of Idaho vs. Lael Hemmert.

Defense Attorney Michael Allen, Sanderson Law Office.

Case involving authorship text messages in charges of kidnapping and rape.

Report of SynAID method and results on authorship of text messages.

State withdrew charges of kidnapping and rape.

#### 2014.

Brick vs. Misicko, John Doe #1, John Doe #2, John Doe #3, and John Doe #4.

Plaintiff Attorneys Daniel Batterman, Law Office of Daniel Batterman and Keith Sachs, Metaxas Norman & Pidgeon, LLP.

Deposition.

Case involving authorship of anonymous blog posts. Case settled.

# Chevron v. Donziger.

Plaintiff Attorney Gibson Dunn & Crutcher, James Sabovich

Case involving authorship and translation of Spanish documents.

Consulting expert to advise attorneys on other linguists' reports and analyses.

#### Theranos v. Fuisz.

Plaintiff Attorney Boies, Schiller & Flexner LLP, Jay Marsillo

Case involving similarity of patent applications.

Case settled.

#### 2013.

United State Attorney's Office, Western District of Kentucky.

Assistant US Attorney Marisa Ford.

Investigation related to Ricky Kelly; issue of authorship. Case withdrawn.

# Scripps College of the Claremont Colleges, Faculty Investigation.

Plaintiff Attorney Lawrence A Walraven.

Case involving faculty authorship of anonymous letters.

Case mediated and settled.

Investigation of Authorship in Mark Hanna Biography by Thomas Beers.

Historian Kristie Miller and attorney Robert McGinnis. www.hnn.com

Death Investigation of Shane Todd.

Mary Todd.

#### 2012

State of Washington vs William Hargrove.

Defense Attorney David Hearrean.

Case involving authorship of note alleging child sexual abuse.

Frye Hearing regarding admissibility of text typing authentication method.

**Qualified as Expert Witness in Spokane Co Superior Court.** 

Testimony ruled fully admissible (capacity and text typing methods).

Investigation of authorship of corporate communications.

Edward Geib.

#### 2011

State of California Re: Masters Habeas Corpus Investigation

Deputy Attorney General Alice Lustre.

Consulting expert to advise on forensic linguistic methods. Case under appeal.

In re: Marriage of Isaacs.

Public Defender Chris Thomas, Los Angeles County.

Review of forensic stylist's report.

State of Connecticut vs Robert Pentland

Public Defender, Attorney Thomas Ullman

Witness tampering in communications.

State of Washington vs. Justin Summa.

Public Defender Kari Reardon, Spokane

Understanding of Miranda warning by mentally-challenged juvenile.

Gemological Institute of America vs. EGL USA.

Defense Attorney Alston & Bird LLP, Lara Holzman

Trademark similarity.

#### 2010

State of Nebraska v. Jose Jefferson

Investigation support to Lincoln Police Department for Threat Assessment.

Lennar Corporation vs. Barry Minkow

Plaintiff Attorney O'Melveny & Myers LLP, Kathryn Cahan Authorship of posts on "whistleblower" website; consulting expert.

#### 2008

Arsenault Gibson v. Dixon.

Plaintiff Attorney David DeLugas.

Case involving authorship of hacked match.com profile.

Qualified as Expert Witness in Fulton Co (Atlanta GA) Superior Court.

Testimony ruled fully admissible; Judge overruled Daubert motion to exclude.

# Robert Wood, PhD.

Case involving authorship of "Majestic Documents." Research project.

#### RCMC v Westchester.

Plaintiff Attorneys William T. Brooks and Jeffrey F. Ryan

Case involving authorship of adjuster's report. Sworn report. Case settled.

# Investigation re: Nunez v. Berdy.

Defense Attorney Major William Helixon Brigade Judge Advocate of USA TF Bayonet Case involving authorship of e-mails. Sworn Report for internal investigation.

#### Hanus v Hale.

Plaintiff Attorney Gary Jander.

Case involving authorship of witness statements.

Rebuttal of forensic stylistics analysis.

Sworn report and Deposition. Forensic stylistics witness withdrawn.

# Best Western International v. John Doe.

Defense Attorneys Crystal Rowe and Richard Mullineax.

Case involving authorship of blog posts.

Sworn Report and Sworn Deposition. Case settled; Clients won over \$2M settlement with ability to disclose terms of settlement.

# Berkery v. Estate of Lyle Stewart.

Pro Se.

Case involving defamation; analysis of documents for defamatory language.

Sworn report. Case settled.

#### 2007

New Jersey v. Melanie McGuire.

Defendant Attorneys Stephen Turano and Joseph Tacapina

Case involving authorship of anonymous communications to police and prosecutors.

Rebuttal of forensic stylistics analysis, sworn report; Frye hearing and trial testimony.

Forensic stylistics analyst stipulated as not an expert in authorship identification, not permitted to state any conclusion as to authorship or refer to any numbers.

Qualified as Expert Witness in New Jersey.

Shovers et al. v Shovers.

Plaintiff Attorneys Matthew O'Neal and Jeremy Levinson.

Case involving authorship of sale agreement. Sworn report, deposition.

Michael Heiser. Case involving authorship of the "Majestic documents". Report.

#### 2006

Brampton Flying Club v Robert Keeping. (Canada) 2006.

Sworn Report, Rebuttal of forensic stylistic/alternative methods. Case settled.

Nautilus v. Icon. 2006.

Plaintiff Attorney Alex Tamin.

Sworn report; Case involving trademark similarity.

Opposing expert withdrawn just before my scheduled deposition.

C. T. Zao. Case involving single or collaborative authorship of narrative essay. Report.

Cahill v. Schaffer 2006.

Plaintiff Attorney Robert Beste

Smith Katzenstein and Furlow

Case involving authorship of blog posts.

Independent analysis and rebuttal of forensic stylistics. Case settled.

Padiyar v. Yeshiva University, et al. 2006.

Defendant Attorneys Steve Russo and Daniel Riesel.

Case involving authorship of memorandum.

Sworn report rebutting forensic stylistics analysis as well as independent analysis.

Forensic stylistics analysis was not admitted as evidence.

Case settled.

#### 2005

S. Kokonas. Case involving single or collaborative authorship of law school exams.

Chipotle Mexican Grill v. Bolle, et al. 2005-2006. Case No.: 04 CV 2576

Plaintiff Attorney Michael W. Skorupka.

Case involving relatedness of training materials.

Sworn report.

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Howard v. Howard, Metropolitan Life Insurance, et al. 2005. Case No.: BC309444

Superior Court of the State California for County of Los Angeles-Central District.

Plaintiff Attorneys David Libman and Jeff Lewis.

Case involving authorship of contractual letters.

State of North Carolina v. Katherine Tew. 2005.

Defense Attorney Keith Williams.

Case involving authorship of electronic letters on school computer.

Sworn report.

#### 2004

State of Florida v. Diaz Perez. Osceola County Case No. 2003 CF 002555 CR

Defense Attorney A. Michael Bross.

Case involving authorship of suicide note in homicide trial.

Sworn report, deposition. Charges reduced and defendant freed.

Landmark v. Ross. 2004.

Plaintiff Attorney Gary Larsen.

Case involving authorship of web-published documents.

State of Washington v. Preston. 2004. Cause No. 02-1-03082-4

Assistant District Attorney Kelly A. Fitzgerald.

Affidavit for prosecution regarding status of reliability in forensic stylistics.

Forensic stylistics analysis excluded.

#### 2004

Mazen, Hasan Matter.

Plaintiff Attorney Robert Jarchi.

Case involving authorship of emails. Case settled.

United States of America v. Eric Robert Rudolph. 2004. Case No. CR 00-S-0422-S

U.S. District Court for the Northern District of Alabama, Southern Division.

Defense Attorney Paul Kish.

Case involving authorship of anonymous letters. Defendant pled guilty.

Nuwayser, Kutani, Kutani v. Kutani. 2004.

Plaintiff Attorney Winthrop Short.

Case involving authorship of letters relating to inheritance.

Sworn report. Case settled.

#### 2003

Mowry v. Viacom, Paramount and Niccol. 2003-2005.

Plaintiff Attorney Alan A. Heller.

Case involving plagiarism of screenplay.

Sworn report, deposition. Cladistic methodology excluded under Daubert.

Hargett v. Hargett. 2003-2005. Case No. SDR 0017114

Defense Attorney Jack Laufenburg.

Case involving authorship of letters in custody dispute.

Qualified as Expert Witness, Placer County (California) District Court.

Kibbutz Shefayim v. Bederman. 2003. C.A. No. PJM 03-CV-2525

United States District Court for the District of Maryland, C.A. No. PJM 03-CV-2525.

Defense Attorney Ernest Tuckett.

Case involving authorship of letter confirming business relationship.

Sworn report. Case settled.

United States v. Audityan. 2003.

US District Court for the District of Texas.

Defense Attorney Rip Collins.

Case involving chat room e-mails in child sexual predator trial.

United States vs. William Emmett LeCroy, Jr. 2003. Case 2:02-CR-38.

US District Court for the Northern District of Georgia, Gainesville Division.

Defense Attorneys Paul Kish and Stephanie Kearns.

Daubert Hearing on Admissibility of Handwriting/Questioned Document Examination.

**Testified at Daubert Hearing, US District Court.** 

Beckman Coulter v. Dovatron/Flextronics. 2003. Case No. 01-CC-08395

Orange County Superior Court.

Attorney Scott Ferrell and Legal Assistant Kathy Casford.

Case involving authorship of business memorandum.

Rebuttal of forensic stylistics analysis, sworn report; forensic stylistics excluded.

Southeastern Regional Medical Center v. Jackson. 2003--.

Defense Attorney J. Clayton Culotta, Law Office of Kenneth Joel Haber, P.C.

Case involving authorship of document used for revocation of hospital privileges.

Sworn report.

Castillo-Bow v. Department of Housing and Community Development. 2002-2003.

SPB Case No. 03-0215

Plaintiff Attorney Jay Dyer, California State Employee Association.

Case involving authorship of documents used in dismissal.

Case settled.

#### 2002

Art Science Research Laboratory. 2002.

Rhonda Roland Shearer, Executive Director, www.WTCLivingHistory.org.

World Trade Center Living History Project.

Plagiarism in William Langewiesche's American Ground.

Lesnick v. Mathews. 2002-2003.

Circuit Court of the City of Williamsburg and County of James City. Law No. 9530.

Attorney John Heilig, The Heilig Firm. Terrance Graves, Sands Anderson.

Case involving authorship of documents describing medical consult.

Sworn report, depositions (2).

Prajogi v. Udem. 2002.

Defense Attorneys Mark Egerman and Phil Brown, Egerman & Brown.

Case involving authorship of letters authorizing transfer of funds.

Qualified as Expert Witness, Los Angeles District Court.

Rebuttal of forensic stylistics.

# 2001

People of California v. Michael William Flinner. 2001-2003. Case No. SCE 211301.

Superior Court of the State California (San Diego)

Defense Attorney John A. Mitchell.

Case involving authorship of anonymous letter; capital, homicide.

Sworn report rebutting forensic stylistics; forensic stylistics excluded.

State of Florida v. Lee Anthony Hall. 2000-01. Case No. CRC00-16998CFANO-M

Assistant State Attorney Glenn Martin.

Case of attempted homicide and authorship of anonymous, confessional letter.

Sworn report of independent analysis; deposition.

Amon v. Riley/U.S. Department of Education, Washington, DC. 2001. Civil Action No. 00-140 (EGS) (D.D.C.)

Assistant U.S. Attorney Meredith Manning.

Case involving authorship of electronic memoranda.

Sworn report of independent analysis. Case withdrawn by plaintiff.

Generation Ukraine Inc. v. Ukraine. 2001. ICSID Case No. ARB/00/9

Eugene J Laka, Chairman of Generation Ukraine, Inc.

Case involving authorship of letters appointing tribunal.

Sworn report.

Greene v. Dalton/US Navy, Washington, DC. 2000-01.

Assistant U.S. Attorneys Brian Sonfield and Diane Sullivan,

U.S. Navy Attorney Ray Goldstein.

Case involving authorship of electronic memoranda.

Sworn report of independent analysis.

Qualified as Expert Witness, US District Court.

# Daubert Hearing; Testimony based on Syntactic Analysis Method ruled fully admissible.

#### 2000

Walter Albers, Albers Technologies Corp, Phoenix, Arizona. 2000.

International Arbitration Tribunal Award.

Text analysis of award document for register and dialect.

# 1990-1999.

Zarolia v. Osborne/Buffalo Environmental Corp., Annapolis, MD. 1998.

Defense Attorney Linda M. Schuett.

Case involving wrongful termination; authorship of damaging anonymous letters.

Qualified as Expert Witness, Superior Court of Maryland.

U.S. Army Criminal Investigations Division, Arlington, VA. 1997-98.

Case involving obstruction of justice; authorship of threatening letters and emails.

Metro-Dade Police Department, Miami, FL. 1996.

Case involving hate crime; dialect features of graffiti.

Johnston City Police Department, Johnston, RI. 1994-5.

Case involving missing person/possible homicide; authorship of anonymous tip letters.

North Carolina v. Douglas Featherstone.

Susan Edwards, Wake County District Attorney's Office, Raleigh, NC. 1993-4. Case involving solicitation to commit murder; authorship of damaging anonymous letter.

North Carolina v. Joseph Mannino.

Det. W. Allison Blackman, Major Crimes Unit, Raleigh Police Dept., Raleigh, NC. 1992.

Case involving homicide; authorship of computer-generated suicide notes.

This case was featured in the episode "Letter Perfect" on the cable-television show "Forensic Files," premiered December 10, 2003.

#### **GRANTS AND FELLOWSHIPS:**

# **Principal Investigator:**

Pattern Recognition Techniques in Forensic and Investigative Sciences.

Office of Science and Technology, National Institute of Justice,

US Department of Justice.

\$174,000.00 December 1, 1998 - June 30, 2004.

Linguistic Methods for Determining Author Identification.

Visiting Fellowship, Office of Science and Technology,

National Institute of Justice, US Department of Justice. \$214,500.00 September 1, 1995 - August 31, 1998.

Travel to First International Workshop on Head-driven Phrase Structure Grammar.

Ohio State University, Columbus, OH. July - August, 1993. CHASS Research Fund and Humanities Foundation Research Fund. \$1,100.00

SAS JMP Statistical Software and Analysis. CHASS Office of Research Programs. \$200.00 Metalinguistic Awareness, Linguistic Analysis and Online Support Systems.

CHASS Research Fund. July 1992 - July 1993. \$2,500.00

Design and Online Support of a Hypercard-Based Tutorial for Linguistic Analysis.

NCSU Instructional Computing Grant. November 1991- June 1992. \$1,600.00

Grant-in-Aid for Seminar on Awareness of Words in Renaissance.

The Folger Institute, Washington, DC. Fall 1991. (unable to accept) \$4,515.00

Metalinguistic Awareness in Developmental English Students at NCSU. Faculty Research and Development Grant. 1991. \$3,500.00

Linguistic and Cognitive Characteristics of Adult Illiterates.

Commission on Higher Education, State of South Carolina. 1989-90. \$76,903.00

Summer Research, English Department, University of South Carolina. 1988. \$1,837.00

University Fellowship for Graduate Study, Brown University, 1982-83. \$13,000.00

Scholarship for Summer Institute, Linguistic Society of America, 1982. \$750.00

# **Director of Assessment:**

Workplace Literacy System Project: Phase 2, US Department of Education. Principal Investigator: Bruce Poulton. September 1992- January 1994. \$266,000.

#### **PATENTS:**

Chaski, C.E. 2018. US 9,880,995 B2. Patent granted and formally released in First Quarter of 2018. "Variables and Method for Authorship Attribution."

#### **PUBLICATIONS:**

#### **Books:**

2023. Linguistics as a Forensic Science (four volumes under contract)

# Monograph:

1999. Eyewitness Evidence: A Guide for Law Enforcement. Washington, DC: U.S.

Department of Justice, Office of Justice Programs. Also available through National
Criminal Justice Reference Service: <a href="http://www.ncjrs.org">http://www.ncjrs.org</a> NCJ 178240. This was jointly authored by the Technical Working Group for Eyewitness Evidence in which I served.

# **Book Chapters:**

- 2013. "Author Identification in the Forensic Setting." In Lawrence Solan and Peter Tiersma, editors. *The Oxford Handbook of Language and Law,* Oxford University Press.
- 2010. "Linguistics as a Forensic Science: The Case of Author Identification." In Susan Behrens and Judith A. Parker, editors. *Language in the Real World*. Routledge.
- 2008. "The Computational-Linguistic Approach to Forensic Authorship Attribution." In Frances Olsen, Alexander Lorz, and Dieter Stein, editors. *Law and Language: Theory and Practice*. Düsseldorf University Press.
- 2008. "Authorship Attribution in a Multinational Corporate Setting." With Mary Snider Boldt. In Frances Olsen, Alexander Lorz, and Dieter Stein, editors. *Law and Language: Theory and Practice*. Düsseldorf University Press.
- 2007. "The Keyboard Dilemma and Author Identification." In Sujeet Shinoi and Philip Craiger, editors. *Advances in Digital Forensics III.* New York: Springer.
- 2005. "Forensic Linguistics, Author Identification and Admissibility." In Cyril Wecht and John Rago, editors. Foundations of Forensic Science and Law: Investigative Applications in Criminal, Civil and Family Justice. Boca Raton: CRC Press.
- 2000. "Preface."

"Linguistic Authentication and Reliability."

National Conference on Science and Law Proceedings. Washington, DC: U.S.

Department of Justice, Office of Justice Programs. Also available through National Criminal Justice Reference Service: http://www.ncjrs.org NCJ 179630, 178412.

#### **Academic Peer-Reviewed Articles:**

- 2017. "Anonymous Personae in Cybercrime: Stylometry and Computational Forensic Linguistics." *Forensic Science International* (Vol. 277, pp. 70-70). Ireland: ELSEVIER IRELAND LTD.
- 2014. "Cases in the Four Corners of Forensic Linguistics." *Science, Technology and Law.* Volume5: 1. [Special ] Several Issues on the right of representation and the Scientific Investigation. Chungbuk National University School of Law Law Research Institute.
- 2013. "ILER: A Web-Accessible Resource for Research in Forensic Linguistics." *Linguistic Evidence in Security, Law and Intelligence*, Volume 1:1. Available for download at http://www.lesli-journal.org/ojs/index.php/lesli/article/view/8
- 2013. "Best Practices and Admissibility in Forensic Author Identification." *Journal of Law & Policy, Brooklyn Law School, Brooklyn, New York.*
- 2007. "Identifying Authorship by Byte-Level N-Grams: The Source Code Author Profile (SCAP) Method." *International Journal of Digital Evidence*, Spring 2007, Volume 6:1. With G. Frantzeskou, E. Stamatatos, S. Gritzalis, and B. S. Howald.
- 2006. (accepted and withdrawn). "Discriminant Function Analysis Results for Authorship Attribution in the Forensic Setting." *International Journal of Speech, Language and Law.*
- 2005. "Computational Stylistics in Forensic Author Identification." *Proceedings of the SIGIR* 2005 Workshop on Stylistics. ACM SIGIR 2005, Salvador, Bahia, Brazil.
- 2005. "Discriminant Function Analysis in Forensic Authorship Attribution." Proceedings of the Classification Society of North America/Interface Foundation Annual Meeting. *Interface Symposium and its Proceedings: Computing Science and Statistics.* St. Louis: Washington University.
- 2005. "Who's At the Keyboard? Recent Results in Authorship Attribution." *International Journal of Digital Evidence*. Volume 4:1. Spring 2005. *Available at http://www.ijde.org*
- 2004. "Review of Olsson's Forensic Linguistics: An Introduction to Language, Crime and the Law." Forensic Linguistics: International Journal of Speech, Language and Law. Volume 11.
- 2002. "Language as Clue: Authorship Identification in an Electronic Society." *Law Enforcement Executive Institute Forum.* Volume 2, Number 3. September 2002. Published by University of Western Illinois.
- 2001. "Empirical Evaluation of Language-Based Author Identification Techniques."

- Forensic Linguistics: International Journal of Speech, Language and Law Volume 8:1. pp. 1-64. June 2001. Published by University of Birmingham, England.
- 1997. "Who Wrote It? Steps Toward a Science of Authorship Identification."

  National Institute of Justice Journal. September 1997. Also available through National Criminal Justice Reference Service: <a href="http://www.ncjrs.org">http://www.ncjrs.org</a> NCJ 184604.
- 1994. "The Future Pluperfect: Double Tense in Southern American English." American Speech: Journal of the American Dialect Society.
- 1992. "Networked Academic Publishing and the Rhetorics of its Reception." *Centennial Review.* With Eyal Amiran and John Unsworth.
- 1990. "The Big Three in Contemporary Syntax: Review of Geoffrey Horrock's Generative Grammar."

  American Speech: Journal of the American Dialect Society.
- 1988. "GB, GPSG and the Separation of Case and Agreement."

  Proceedings of CLS Parasession on Agreement.

  University of Chicago: Chicago.
- 1987. "Encoding Case Variation in the Grammar."

  Proceedings of NWAV XV. Stanford University, Palo Alto, CA.
- 1986. "Linear and Metrical Analyses of Manam Stress." *Oceanic Linguistics*, Vol. XXV.
- 1985. "Parser Design and the Mapping from Competence to Performance." Brown University Working Papers in Linguistics, Volume V.

#### **Technical Grant Reports:**

- 1998. A Daubert-Inspired Assessment of Current Techniques for Language-Based Author Identification. ILE Technical Report 1098. Also available through National Criminal Justice Reference Service: http://www.ncjrs.org NCJ 172234.
- 1994. Assessing the TextDisc-Based Workplace Literacy Program: Method, data and Results. Technical Report. (with Jamie Strauss Larsen). NCSU.
  Raleigh, North Carolina.
- 1993. Design of an Assessment Module for TextDisc, a Multimedia Workplace Literacy Program. Technical Report. NCSU. Raleigh, North Carolina.

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#### **General Reader Publications:**

- 2014. "Adding Forensic Linguistics to the Interviewing and Interrogation Toolkit. Part 2: Using Forensic Linguistics." *CFI Insider* 2014, Issue 4.
- 2014. "Adding Forensic Linguistics to the Interviewing and Interrogation Toolkit. Part 1: Evaluating Forensic Linguistics." *CFI Insider* 2014, Issue 3.
- 2012. "Identifying Cars, Guns and Suicide Notes." *National Police Suicide Foundation Newsletter*.
- 2006. "Forensic Linguistics." McGraw-Hill 2007 Yearbook of Science and Technology.
- 1994. "Using Language Experts in Criminal Investigations," PI Magazine.

#### **CONFERENCE PRESENTATIONS AND INVITED LECTURES:**

(all peer-reviewed by linguists, computer scientists or forensic scientists except those marked with asterisk, which are invited lectures or keynote speeches)

#### ON FORENSIC LINGUISTICS:

- 2023a. "True and False Sexual Assault Statements." Engineering & Applied Sciences Section, American Academy of Forensic Sciences Annual Proceedings, Orlando, Florida.
- 2023b. "Testing basic Toolkits for Forensic Text Analysis: Lemmatizers." Engineering & Applied Sciences Section, American Academy of Forensic Sciences Annual Proceedings, Orlando, Florida. With Angela Almela PhD and Pascual Cantos Gomez PhD
- 2022b. "Validation Testing Outside & Inside Casework." Engineering & Applied Sciences Section, American Academy of Forensic Sciences Annual Proceedings, Seattle, Washington.
- 2022a. "The Lineup Technique for Forensic Authorship Identification." Engineering & Applied Sciences Section, American Academy of Forensic Sciences Annual Proceedings, Seattle, Washington.
- \*2021c. "A Primer for Linguistics as a Forensic Science." National White Collar Crime Center.
- 2021b. "Deception Data, Mindset and Validation Testing." Engineering & Applied Sciences Section, American Academy of Forensic Sciences Annual Proceedings, Virtual Meeting.
- \*2021a. "Best Practices for Corpus Linguistics in the Forensic Setting." 12<sup>th</sup> International Conference on Corpus Linguistics (CILC2021) (keynote speech).

- 2020a. "Who Was Texting During the Alleged Kidnapping and Rape?" Criminalistics and Engineering & Applied Sciences Sections, American Academy of Forensic Sciences Annual Proceedings, Anaheim, CA
- 2020b. "Forensic Linguistic Research Collaboration between an Industry Research Institute and a Forensic Science Laboratory." (with Andrea Ledič) Engineering & Applied Sciences Section, American Academy of Forensic Sciences Annual Proceedings, Anaheim, CA
- 2020c. "Qualifications for Professional Work in Forensic Linguistics." Engineering & Applied Sciences Section, American Academy of Forensic Sciences Annual Proceedings, Anaheim, CA
- 2019e. "Discourse-Based Authorship Identification in the Forensic Setting." International Pragmatics Association. Hong Kong.
- \*2019d. "ALIAS." 10<sup>th</sup> Annual William Burnham Jr Death Scene Awareness Project May 9, 2019 in Harrisburg, PA (keynote speech)
- 2019c. "An Overview of Computational Linguistic Techniques for Forensic Purposes." Engineering & Applied Sciences Section, American Academy of Forensic Sciences Annual Proceedings, Baltimore, MD, USA.
- 2019b. "A Social Science Paradigm for Forensic Handwriting Identification." Questioned Documents Section, American Academy of Forensic Sciences Annual Proceedings, Baltimore, MD, USA.
- 2019a. "The Potential and Problem of Academics as Forensic Experts". Jurisprudence Section, American Academy of Forensic Sciences Annual Proceedings, Baltimore, MD, USA.
- 2018b. "Style, Stylometry and Authorship." International Congress of Linguists, Cape Town, South Africa.
- \*2018a. "ALIAS: Social Science Methods for Rigorous Qualitative Assessment." National Association of Document Examiner Annual Meeting. Jacksonville, Florida.
- \*2017g. Demonstration of ALIAS. Forensic Linguistics Workshop. International Language and Law Association. Freiburg, Germany.
- 2017f. "Style and Authorship." Forensic Linguistics Workshop. International Language and Law Association. Freiburg, Germany.
- 2017e. "Anonymous Personae in Cybercrime: Stylometry and Computational Forensic Linguistics." 21st Triennial Meeting of the International Association of Forensic Sciences. Toronto, Canada

- 2017d. "Engineering Sciences and Human Rights Workshop: Forensic Linguistics." 21<sup>st</sup> Triennial Meeting of the International Association of Forensic Sciences. Toronto, Canada
- 2017c. "Error Rate and Digital Authorship Identification." FBI-NIST International Symposium on Error in Forensic Science, Gaithersburg, MD. USA
- \*2017b. "El bullying desde la perspectiva de la lingüística forense: Bullying from the perspective of forensic linguistics." Acoso moral, maltrato y violencia de género. Herramientas para su diagnóstico y erradicación. Alicante, Spain.
- \*2017a. "Plagiarism and authorship analysis, the modern state of the art in methodology. At the intersection of linguistics, law and economy". University of Bonn and University of Dusseldorf, Germany.
- 2016f. "Register, Genre, Topic and Scalability in Forensic Author Identification." Societas Linguistica Europaea. Naples, Italy.
- 2016e. "Alternative Paradigms for Forensic Linguistics." with Angela Almela (Centro de la Defensa, Spain) Societas Linguistica Europaea. Naples, Italy.
- 2016d. "Standards for Educational Training in Forensic Linguistics." with Angela Almela (Centro de la Defensa, Spain), Dieter Stein (Max Planck Society, Germany) and Victoria Guillen Nieto (Alicante, Spain). Societas Linguistica Europaea. Naples, Italy.
- 2016c. "Standards for Education and Training for Work in Forensic Linguistics." with Angela Almela (Centro de la Defensa, Spain), Dieter Stein (Max Planck Society, Germany) and Victoria Guillen Nieto (Alicante, Spain). TALE: The Association for Linguistic Evidence. Washington, DC.
- 2016b. "Results of Testing Automatic and Automated Methods of Authorship Identification." TALE: The Association for Linguistic Evidence. Washington, DC.
- 2016a. "Forensic Phonetics and Linguistics as Science." Joint Symposium of the Linguistic Society of America and TALE: The Association for Linguistic Evidence. Washington, DC.
- 2015s. "Forensic Linguistics." Lecture to attorneys, criminologists and government officials. Hosted by DEMCO at The Aegli. Athens, Greece.
- 2105r. "Controversies in Forensic Engineering of Linguistic Evidence: Voiceprints, Stylistics and Word-Based Methods." AAFS Engineering Sciences Section Summer Meeting. Toronto, CA

- 2015q. "Overview of Forensic Natural Language Engineering." AAFS Engineering Sciences Section Summer Meeting. Toronto, CA
- \*2015p. "Forensic Linguistics Tools for Investigating Mental Illness in the Workplace."

  Mental Illness in the Workplace Conference, sponsored by Corporate Investigation Services, London, Ontario, Canada
- \*2015o. "Solving Crimes with Linguistics." The Christina Kakava Linguistics Speaker Series, University of Mary Washington. Fredericksburg, VA
- \*2015n. "Techniques and Tools for Science in Forensic Document Examination." National Association of Document Examiners (NADE) Annual Conference. Nashville, TN.
- \*2015m. "Forensic Linguistics as a Forensic Science." Lecture for Professor Jonathan Koehler's Class, Northwestern University Law School.
- 2015l. "Comparing Literary, Biometric and Forensic Approaches to Linguistic Evidence."

  American Academy of Forensic Sciences, Engineering Sciences Section, Orlando, FL.
- 2015k. "WISER: Automatically Classifying Written Statements As True or False." American Academy of Forensic Sciences, Engineering Sciences Section, Orlando, FL. With Angela Almela PhD, Gary Holness PhD, and Larry Barksdale MA.
- 2015j. "Comparing Statistical and Machine Learning Techniques in Author Identification and Verification." American Academy of Forensic Sciences, Engineering Sciences Section, Orlando, FL. With Gary Holness PhD and Michael Harris PhD.
- 2015i. "LEGLER: LEGal Linguistic Evidence Rulings and Forensic Linguistic Evidence." American Academy of Forensic Sciences, Jurisprudence Section, Orlando, FL. With Harry Miles, Esq, Aaron Alva, and Alexis Rakhel, MA.
- \*2015h. "Models of Language and Forensic Linguistics." Engineering Management and Systems Engineering Lunch Talk Series, George Washington University.
- 2015g. "Extension of a Syntax-Based Author Identification Method for Full Automation." TALE 2015, Portland, OR. With Gary Holness and Michael J. Harris.
- 2015f. "Testing SNARE as a Classifier of Hindi Suicide Notes." TALE 2015, Portland, OR. With Subhash Chandra, MD.
- 2015e. "Comparing Methods of Korean Deception Detection." TALE 2015, Portland, OR. With Seung-Man Kang PhD.

- 2015d. "Cross-Cultural Communication in Forensic Linguistics: Arabic Interviewing." TALE 2015, Portland, OR. With Abdesalam Soudi PhD
- 2015c. "Building Forensic Linguistic Algorithms, Cross-Linguistically."
  Symposium on Expertise and Methodology in Forensic Linguistics, Linguistic Society of America, Portland, Oregon., Linguistic Society of America, Portland, Oregon.
  With Seung-Man Kang PhD, Ángela Almela Sánchez Lafuente PhD, and Abdesalam Soudi PhD.
- 2015b. "Three Approaches to Expertise in Forensic Linguistics as Linguistics."

  Symposium on Expertise and Methodology in Forensic Linguistics, Linguistic Society of America, Portland, Oregon. Linguistic Society of America, Portland, Oregon.
- 2015a. "Linguistics and Law: Challenges, Opportunities and Resources for Linguists."

  Symposium on Linguists Working with Related Professions, Linguistic Society of America,
  Portland, Oregon.
- \*2014n. "The Scientific Paradigm in Forensic Authorship Identification and Its Results." National Police University of China, Shenyang, China.
- \*2014m. "Forensic Linguistics in the United States." National Police University of China, Shenyang, China.
- \*2014l. "What Linguists Bring to Forensic Linguistics." Yinzling Club, Department of Linguistics, University of Pittsburgh.
- \*2014k. "The JonBenet Ramsey Case: Lessons Learned for Using Language Experts." Finding Closure: Annual Symposium of the Wecht Institute, Duquesne University Law School. This lecture was also broadcast through RTI Center of Excellence in Forensic Science.
- \*2014j. "Using Forensic Linguistics in Crime Scene Investigation." The Law Research Institute, Law School, Chungbuk National University, Cheongju, Chungbuk, Republic of Korea
- 2014i. "Forensic Linguistics: Language as Clue and Evidence." International Academy of Forensic Sciences 2014, Seoul, Korea
- 2014h. "K-WISER: A Computational-Linguistic Approach to Detecting Deception in Korean Written Statements." International Academy of Forensic Sciences 2014, Seoul, Korea with Seung-Man Kang, PhD
- \*2014g. "Forensic Linguistics: Myths and Truths." American University, Washington DC.
- 2014f. "Collecting Ground-Truth, Web-Based Data for Research in Forensic Linguistics." American Academy of Forensic Sciences Annual Meeting, Seattle, WA.

- \*2014e. "Science and Conscience in Forensic Linguistics." Martin Luther King Celebration, Department of Linguistics, University of Michigan.
- 2014d. "Data for Empirical Foundations in Forensic Linguistics: Overview of Symposium." Symposium on Data for Empirical Foundation in Forensic Linguistics, Linguistic Society of America Annual Meeting, Minneapolis, MN.
- 2014c. "Collecting Forensic Linguistic Data: Experimental Subjects and Authorship Identification." Symposium on Data Handling in Forensic Linguistics, Linguistic Society of America Annual Meeting, Minneapolis, MN. With Judith A Parker.
- 2014b. "Collecting Forensic Linguistic data: Police and Investigative Sources of Data for Deception Detection Research." Symposium on Data for Empirical Foundation in Forensic Linguistics, Linguistic Society of America Annual Meeting, Minneapolis, MN. With Sgt. Larry Barksdale and Michael Reddington.
- 2014a. "The Four Corners of Investigative Forensic Linguistics." TALE 2014, Minneapolis, MN.
- 2013g. "The Intersection of Teaching English and Forensic Linguistics." With Samina A. Khan, MPhil. 1st International Conference on Linguistics and Language Teaching 2013 Bahawalpur, Pakistan.
- \*2013f. "Forensic Linguistics and Digital Evidence." Forensic Science Dept., High Tech Investigations Track, George Washington University, Washington DC.
- \*2013e. "Opportunity and Community in Forensic Computational Linguistics." University of Washington Computational Linguistics Program, online presentation.
- \*2013d. "Forensic Linguistics, Watergate and Insider Threat." Wecht Institute of Forensic Science, Duquesne University, Pittsburgh, PA. With Philip T. Mellinger.
- 2013c. "Do Police Suicide Notes Differ from General Population Suicide Notes?" American Academy of Forensic Sciences Annual Meeting, Washington, DC. With Robert Douglas, Jr.
- \*2013b. "Linguistics as a Tool in Interviewing and Interrogation." Wicklander-Zulawski Elite Training. Pleasanton, CA.
- 2013a. "Re Forensic Linguistics: Five data Handling Issues. Linguistic Society of America Annual Meeting, Boston, MA.

- 2011c. "IntentFinder: A System for Discovering Significant Information Implicit in Large, Heterogeneous Document Collections." With Lyle Ungar and Steve Liebholz. IEEE Homeland Security Technology, Boston, MA.
- 2011b. "Facebook and the Faceless: Authorship in an Electronic Society." With Alice Lustre, Esq. Jurisprudence Section, American Academy of Forensic Sciences Annual Meeting, Atlanta, GA
- 2011a. "Is This a Real Suicide Note? Authentication Using Statistical Classifiers and Computational Linguistics." With Denise Huddle. Psychiatry and Behavioral Sciences Section, American Academy of Forensic Sciences Annual Meeting, Atlanta, GA.
- \*2010f. "Forensic Linguistics in the Real World of Law." Marymount Manhattan University, New York, NY.
- \*2010e. "Authorship Identification Methods." Princeton University, Princeton, NJ.
- \*2010d. "A Modern History of Handwriting Examination." National Association of Document Examiners Annual Meeting, Portland, OR.
- \*2010c. "Forensic Linguistic Methods for Document Examiners." National Association of Document Examiners Annual Meeting, Portland, OR.
- \*2010b. "ALIAS and web\_ALIAS." National Association of Document Examiners Annual Meeting, Portland, OR.
- \*2010a. "Forensic Linguistic Methods." University of Mary Washington, Fredericksburg, VA.
- \*2010. "Text Attribution Research Update." United States Secret Service Technical Exchange Meeting. Washington, DC. March.
- 2009d. "The Language of Trauma Narratives." International Academy of Law and Mental Health. New York, NY.
- 2009c. "Forensic Linguistics: Curious and Instructive Parallels between Voiceprints and Forensic Stylistics." With John R. Middleton, Esq. Engineering Sciences Section. American Academy of Forensic Sciences Annual Meeting, Denver CO.
- 2009b. "Validation Testing for FLASH ID on the Chaski Writer Sample Database." With Mark A. Walch. Questioned Documents Section. American Academy of Forensic Sciences Annual Meeting, Denver CO.

- 2009a. "Using Computational Forensic Linguistics to Screen for Pedophilic Communications." With Raye Croghan. Digital and Multimedia Section. American Academy of Forensic Sciences Annual Meeting, Denver CO.
- \*2008d. "New Directions in Forensic Linguistics: Syntactic Approaches to the Analysis of Forensic Texts." Montclair State University, Montclair, NJ.
- 2008c. "Using the N-Gram Approach for Forensic Authorship Attribution and Text Relatedness." Association for Digital Forensics, Security and Law. Oklahoma City, OK. April.
- \*2008b. "How You Can Use Forensic Linguistics." Nebraska International Association of Identification. Ashland, NE. April.
- \*2008a."A Computational Approach to Threat Assessment." European Association of Threat Assessment Professionals. Lucerne, Switzerland. March.
- 2007i. (with Frances Olsen, J.D.) "A Diachronic Analysis of Judicial Language in Domestic Violence Rulings." Law and Society Association Annual Meeting, Berlin, Germany. July.
- 2007h. "Overview of Research in the Linguistics of Deception." Panel on the Linguistics of Deception. International Association of Forensic Linguists 8, Seattle, WA. July.
- 2007g. "Multilingual Forensic Author Identification Through N-Gram Analysis." International Association of Forensic Linguists 8, Seattle, WA. July.
- 2007f. "Empirically Testing the Uniqueness of Aggregated Stylemarkers." Panel on Authorship Attribution. International Association of Forensic Linguists 8, Seattle, WA. July.
- 2007e. "Real Threats, Simulated Threats and the Unsaid." International Academy of Law and Mental Health, Padua, Italy. June.
- 2007d. "Automating a Reliable System for Distinguishing Real from Simulated Threat Letters." American Academy of Forensic Sciences Annual Meeting, (Psychiatry and Behavioral Sciences Section), February, 2007. San Antonio, TX.
- 2007c. "A Validated Admissible, Computational Method for Detecting Electronic Authorship." American Academy of Forensic Sciences Annual Meeting, (Engineering Sciences Section), February, 2007. San Antonio, TX.
- 2007 b. "The Keyboard Dilemma and Forensic Author Identification." International Workshop on Digital Forensics (IFIP- Digital Evidence). January, 2007. National Center for Forensic Science, Orlando, FL.

- \* 2007a. "Forensic Linguistics, E-Discovery and Digital Forensics." Delaware Bar Association Labor and Employment Law Section. January, 2007. Wilmington, DE.
- 2006h. "Text-typing a Suicide Note and Justice for Diaz-Perez."

  Law and Society Association Annual Meeting, Baltimore, MD. July.
- 2006g. "Text-typing Threat Letters." (with Blake Stephen Howald, JD and Judith Parker, PhD) Law and Society Association Annual Meeting, Baltimore, MD. July.
- 2006f. "Authorship Identification in Actual Situations: Questions, Data, and Method." Bonn University, Bonn, Germany. May.
- 2006e. "Multilingual Interferences in Corporate Email Authorship Identification." (with Mary Snider). Bonn University, Bonn, Germany. May.
- 2006d. "The Computational-Linguistic Approach to Forensic Authorship Attribution." The Language and Law Conference, Düsseldorf, Germany. May.
- 2006c. "German-American Standards for Authorship Attribution in Multinational Corporation Cases." (with Mary Snider, PhD).

  The Language and Law Conference, Düsseldorf, Germany. May.
- 2006b. "The Forensic Linguistics of Authorship Attribution."

  Minisymposium on Language and Law. Yale University Law School. April.
- 2006a. "Applied Linguistics, Forensic Linguistics and Authorship Attribution." Montclair State University. February.
- 2005g. "The Computational-Linguistic Approach to Forensic Authorship Attribution." Poster at National Academy of Sciences Sackler Symposium on Forensic Science: The Nexus of Science and Law, Washington DC, November.
- 2005f. "Computational Stylistics in Forensic Author Identification." ACM Special Interest Group on Information Retrieval Conference, Salvador, Bahia, Brazil. August.
- 2005e. "Alternative Distance Measures for Validating the Syntactic Analysis Method." Seventh Biennial International Association of Forensic Linguists Conference, University of Cardiff, Wales. July.
- 2005d. "Discriminant Function Analysis in Forensic Authorship Attribution." Joint Meeting of the Classification Society of North America and The Interface, Washington University, St. Louis, MO. June.
- \*2005c. "The Legal and Scientific Status of Forensic Author Identification."

- Maryland Public Defenders Conference, Ocean City, MD. May.
- 2005b. "Syntactic Measures for Authorship Determination."

  International Linguistics Association Conference, New York, NY. April.
- \*2005a. "Pattern Recognition Techniques in Forensic Sciences: Results and Software Demonstration" National Institute of Justice Research Committee, American Academy of Forensic Sciences Annual Meeting, New Orleans, LA. February.
- 2004. "Recent Results in the Validation of the Syntactic Analysis Method of Authorship Attribution." Conference on Language and Law, Cardiff, Wales. July.
- \*2004. "The Syntactic Analysis Method of Author Identification." National Institute of Justice Research Committee, American Academy of Forensic Sciences Annual Meeting, Dallas, TX. February.
- 2003. "Author Identification in Civil and Criminal Cases." Massachusetts Institute of Technology, Lincoln Laboratory, Speech and Language Group, Technical Exchange Meeting (including LL, ILE, USSS, Brooklyn Law School). Lexington, MA. October.
- 2001. "A Validated Method for Authorship Attribution."
  International Association of Forensic Linguists Bi-annual Meeting, St. Julian's, Malta. June-July.
- 2000. "Identification through Linguistic Patterns."

  International Association of Identification Annual Meeting, Charleston, WV. July.
- 1999a. "Reliability and Author Identification."

  National Conference on Science and the Law (sponsored by US DOJ's National Institute of Justice, American Academy of Forensic Sciences, American Bar Association and National Center for State Courts In collaboration with Federal Judicial Center and National Academy of Sciences. San Diego, CA. April.
- 1999b. "Linguistic-based Authorship Identification."

  Association of Forensic Document Examiners, Continuing Education Symposium,
  Phoenix, AZ. November.
- 1998. "Toward an Authentic Science of Authorship."

  Mid-Atlantic Association of Forensic Sciences, Rockville, MD. May.
- 1998. "An Automated Language-Based Authorship System for Document Authentication."

  Questioned Document Section, American Academy of Forensic Sciences Annual Meeting, San Francisco, CA. February.

- \*1998. "Linguistic Methods of Determining Authorship: Progress Report 3."

  National Institute of Justice Research Committee,

  American Academy of Forensic Sciences Annual Meeting, San Francisco, CA. February.
- 1997a. "Electronic Parsing Authorship System."
  International Association of Forensic Linguists Biannual Meeting,
  Durham, NC. September.
- \*1997b. "Linguistic Methods of Determining Authorship: Progress Report 2."

  National Institute of Justice Research Committee,

  American Academy of Forensic Sciences Annual Meeting, New York, NY. February.
- 1997c. "Electronic Parsing for Idiolectal Features in Suspect Documents."

  Linguistic Society of America Annual Winter Meeting, New York, NY. January.
- 1996a. "Empirical Evidence for Language-Based Methods of Author Identification." International Association of Identification Annual Meeting, Greensboro, NC. July.
- \*1996b. "Linguistic Methods of Determining Authorship: Progress Report 1."

  National Institute of Justice Research Committee,

  American Academy of Forensic Sciences Annual Meeting. Nashville, TN. February.
- 1995. "Language-Based Methods of Author Identification."

  Mid-Atlantic Academy of Forensic Sciences Annual Meeting, Fairfax, VA. May.
- \*1993. "The Role of the Linguist in Forensic Investigation."

  Major Crimes Division, Raleigh Police Department, Raleigh, NC. April.

# ON COMPUTATIONAL AND THEORETICAL LINGUISTICS:

- 1993. "The Syntax of Double Modals in Head-driven Phrase Structure Grammar." Chapel Hill Spring Linguistics Conference, Chapel Hill, NC.
- 1990. "Chomsky's Rivals: Alternative Grammars."

  Exploration in Cognition and Language: The Influence of Noam Chomsky,
  North Carolina State University, Raleigh, NC.
- 1990. "Accounting for Double Modal Dialects in GPSG."

  Symposium on Double Modals in Multiple Frameworks,

  South Eastern Conference On Linguistics, Greenwood, SC.
- 1990. "Using Hypercard to Represent Linguistic Knowledge and Teach Metalinguistic Reasoning."

- 10th Annual Florida Educational Technology Conference, Daytona Beach, FL.
- 1989. "A Metrical Analysis of Papago Noun Pluralization." (w/Kenneth Andrews) Linguistic Society of America Annual Meeting, Washington, DC.
- 1989. "Parsing *Really* Natural Natural Language."

  Center for Machine Intelligence, University of South Carolina-Columbia.
- 1989. "Case Theory, Case In Tiers, GPSG/HPSG and Case Attraction in Greek." MITRE Corporation, Bedford, MA.
- 1989. "Case as Stepsister in GB Theory."

  South Eastern Conference On Linguistics, Norfolk, VA.
- 1988. "Morphological Agreement and Binding Theory."

  South Atlantic Modern Language Association, Washington, DC.
- 1988. "Morphological Conditions on Binding Theory and Syntactic Change." Eastern States Conference on Linguistics,
  University of Pennsylvania, Philadelphia, PA.
- 1988. "Cross-Linguistic Evidence on PRO's Government."

  Symposium on Typology and Parameters,

  South Eastern Conference On Linguistics, Memphis, TN.
- 1987. "Case In Tiers and Case Attraction in Greek."

  Linguistic Society of America Annual Meeting, San Francisco, CA.
- 1987. "Infinitival Constituency in RG, GB and GPSG."

  Modern Language Association, San Francisco, CA
- 1987. "A PROblem in Ancient Greek and Ozark English."13th Annual Conference on Language and Linguistics,University of Minnesota, Minneapolis, MI.
- 1987. "Syntactic Markedness and Clausal Integrity in RG."3rd Biennial Conference on Grammatical Relations and Relational Grammar,University of Iowa, Iowa City, IA.
- 1987. "Pragmatic Factors in the Syntax of Ancient Greek Anaphora."
  Penn Linguistics Colloquium, University of Pennsylvania, Philadelphia, PA.
- 1986. "COMP, Case and the Greek Infinitive."

  Linguistic Society of America Annual Meeting, New York, NY.

- 1986. "Theta Theory, Case Theory and Ancient Greek Case Attraction." North East Modern Language Association, New Brunswick, NJ.
- 1978. "Antigone, Ethos and the Dual."
  Bryn Mawr College Classics Colloquium, Bryn Mawr, PA.

#### ON PSYCHOLOGY OF READING:

- \*1993. "May I Have A Word With You? Adult Literacy and Definitions of Word." Mary Washington College, Fredericksburg, VA.
- 1992. "Metalinguistic Awareness and Literate/Illiterate Responses to Segment Deletion Tasks."

  Linguistic Society of America Annual Meeting, Philadelphia, PA
- 1990. "The *Word* for Linguists, Oral Poets and Adult illiterates." South Atlantic Modern Language Association, Tampa, FL.
- \*1989. "Metalinguistic Awareness and the Acquisition of Literacy."

  Linguistics Program Colloquium, University of South Carolina-Columbia.
- 1989. "Metalinguistic Awareness, Literacy and Natural Readers."

  Cognitive Science Group, Georgia Institute of Technology, Atlanta, GA.
- 1988. "Metalinguistic Assumptions of Reading Methods."Conference on Literacy and Linguistics,17th Annual UWM Linguistics Symposium, Milwaukee, WI.
- 1985. "Linguistic Rules and EFL Reading."6th Annual USF Conference on Second Language Acquisition, Tampa, FL.
- 1982. "Literacy, Self and Other: From Plato to Poulet."

  Conference on Future of Literacy, University of Maryland, Baltimore, MD.

# **TEACHING EXPERIENCE AND RESPONSIBILITIES:**

University of California at Davis, LSA Summer Linguistic Institute, 2019.
Co-teacher, Language and Law (graduate and undergraduate).
University of Chicago, LSA Summer Linguistic Institute, 2015.
Linguistics as a Forensic Science (graduate and undergraduate).

- University of Michigan, LSA Summer Linguistic Institute, 2013.
  - Linguistics as a Forensic Science (graduate and undergraduate).
- George Washington University, Dept of Forensic Sciences, 2012.
  - Forensic Linguistics Seminar (graduate).
- University of Delaware, Georgetown, DE. Linguistics Department. 2001-3.
  - Introduction to Linguistics (undergraduate).
- University of Delaware, Georgetown, DE. Sociology/Criminal Justice Department. 2004.
  - Sociology/Criminal Justice Statistical Research Methods (undergraduate).
- Delaware Technical & Community College, Georgetown, DE. Criminal Justice, 1998-2003.
  - Interviewing Methods, Computer Applications in Criminal Justice (DELJIS) (undergraduate).
- Wilmington College, Georgetown, DE. General Studies, 1995 1999.
  - Literature, Philosophy (undergraduate).
- North Carolina State University, Raleigh, NC. English/Linguistics Department, 1990-1994.
  - Syntax (undergraduate and graduate), Computational Linguistics (graduate), Literacy Studies (graduate).
- University of South Carolina, Columbia, SC. Linguistics Program, 1987-90.
  - Syntax (graduate), Computational Linguistics (graduate), Literacy Studies (graduate), Psycholinguistics (undergraduate honors), Semantics (undergraduate), History of Linguistics (graduate).
- Brown University, Providence, RI. Modern Language Board, 1986-87.
  - English as a Foreign Language for Brown Teaching Assistants (graduate).
- Brown University, Providence, RI. Linguistics Department, 1983-86.
  - Introduction to Linguistics (undergraduate), Computational Linguistics (graduate).
- University of Delaware, Newark, DE. English Department, 1980-82.
  - Composition (undergraduate).
- University of Delaware, Newark, DE. College of Education, Reading Clinic, 1980-81.
  - Remedial Reading (elementary grade levels).
- Springside School, Philadelphia, PA. English Department, 1979-80.
  - Literature, Composition (middle school grade levels).
- Central High School, Accomac, VA. English Department, 1978-79.
  - Literature, Composition, Remedial Reading (secondary grade levels).

# **HONORS AND AWARDS:**

- Andrew Payne Jr Special Achievement Award In Recognition of Exemplary Contributions in Advancing Forensic Engineering Sciences, Engineering & Applied Sciences Section, American Academy of Forensic Sciences, 2019.
- National Institute of Justice Honor for Outstanding Service and Dedication to Improving the Use of Eyewitness Evidence in the Criminal Justice System as Member of National Planning Panel for Eyewitness Evidence, 1999.
- Outstanding Teacher Award Finalist, CHASS, NCSU, 1994.
- Outstanding Teacher Award Finalist, English Dept. USC, 1989.
- Mention for Outstanding Teaching Assistant in Linguistics, Brown University, 1982.

Sheila Kilroy Memorial Scholarship in English, Bryn Mawr College, 1976.

# PROFESSIONAL AND ACADEMIC SERVICE:

# **Professional:**

- 2023--- Treasurer, International Board of Forensic Engineering Sciences
- 2023-24—Chair, Engineering & Applied Sciences Section, AAFS.
- 2022-23—Secretary, Engineering & Applied Sciences Section, AAFS.
- 2018 Local Organizing Committee, ILLA 2019, UCLA.
- 2017 Co-Organizer, ILLA Forensic Linguistics Workshop.
- 2013 Editor, LESLI: Linguistic Evidence in Security, Law and Intelligence.
- 2012—. Associate Editor. *International Journal of Law, Language and Discourse.*
- 2011—. Leadership Circle, TALE: The Association for Linguistic Evidence.
- 2010. Fellow, American Academy of Forensic Sciences, Engineering Section.
- 2010- 2016. Liaison to Legal and Forensic Communities, Linguistic Society of America. Appointed by Executive Committee.
- 2009-2016. Associate Editor. *Language and Law,* journal published by Heinrich Heine University.
- 2006—. Academic Peer Reviewer for abstracts and articles:

Journal of Forensic Science
International Journal of Digital Crime and Forensics
PAN '08, PAN 09
International Journal of Digital Evidence
Foundations of Information Retrieval
Law and Society
Cortex

- 2006—. Associate Member, American Academy of Forensic Sciences, Engineering Section.
- 2006. National Science Foundation Workshop on Resources in Authorship Attribution. Rutgers University.

- 2006—. Advisory Board for Linguistics Department, Montclair State University, Montclair, NJ.
- 2004. Participant in national assessment of authorship attribution technologies. Interviewed by Andrew MacPherson, Dartmouth University, Center for Security Technology.
- 2000--03. Strategic Planning for Investigative and Forensic Sciences Division, OST, NIJ, USDOJ.
- 1998--2000. Planning Panel Member, National Conference on Science and Law Moderator of Panels on Forensic Science Education and Syndrome Evidence
- 1997-2000. Planning Panel Member, NIJ Technical Working Group on Eyewitness Evidence, (TWGEYEE). US Department of Justice.
- 1997-99. Member--Academic Research, FBI Technical/Scientific Working Group on Forensic Document Examination (SWGDOC).
- 1997-99. Member--Academic Research, FBI TWGDOC Subcommittee on Standard Operating Procedures and Terminology.
- 1996. Organizer and Co-Host, Workshop Follow-Up Meeting for Federal FDEs. NIST, OLES, Gaithersburg, MD. December 1996.
- 1996. Organizer and Co-Host, Planning Workshop To Develop A Research Agenda for Questioned Document Examination, NIJ, Washington, DC. July 1996.
- 1995-1998. Visiting Fellow, Investigative and Forensic Sciences Team, OST, NIJ. Collaborated in development of National Commission for the Future of DNA Evidence.

Developed Investigative and Forensic Sciences Program Plan.

Developed Science and Law Program Plan.

Collaborated in Planning of First Science and Law National Conference.

Developed Template for Technical Working Groups.

Eyewitness Identification Literature Review

Presentation to Deputy Assistant Attorney General Brennan.

Planning for TWGEYEE (Eyewitness evidence).

Member, TWGEYEE.

Planning for TWGCSI (Crime Scene Investigation).

Organized Panel to Develop Questioned Document Research Solicitation.

# **Academic:**

2000-03. Delaware Technical & Community College, Georgetown, DE. Campus Chair, Middle States Re-Accreditation Project.

Managed campus-level re-accreditation, supervised 94 faculty & staff on project, Organized and Conducted faculty, staff and student surveys, Analyzed survey data, Wrote 400-page final report, Presented intermediate and final report findings to faculty and administration, Developed consensus groups for final recommendations (this was particularly noted by the Middle States Commission as innovative and desirable).

Member, Campus Planning Committee.

1990-1994. North Carolina State University, English Department, Raleigh, NC. Member, Committee to Develop PhD Program.

Member, Graduate Studies Committee.

1986-1990. University of South Carolina, Linguistics Program, English Dept., Columbia, SC. Linguistics Colloquia, Graduate advising.

Annex 2: ALIAS LexiLap Analysis Using Overlap Rates

# **ALIAS Lexical Cluster Overlap Analysis using Overlap Rate**

CaseID Freeman 1				1
TargetAuthor	Lynne Freeman			
KEYWORD	accident			
Un to 2 Standa	rd Deviations	Average Baseline	Up to 2 Stand	dard Deviations
below Average		Lexical Overlap Rate		ge Baseline Rate
				ge Baseline Rate

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Tracy Wolff accident	157	587	26.746167	^
					۱
					~

4.32958057

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

1.7663327

-2.73575024

-.969417535

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 184 389 47.3007712 1 Alaska

12.2548271

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

4.367637

-5.21572093

-.848083931

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Tracy Wolff alien	35	179	19.5530726	^
					~

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Tracy Wolff aurora	19	60	31.6666667	^
					~

8.24424875

27.5559666

35.8002154

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

2.82322037

11.0674691

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 1043 1758 59.3287827 1 blood

TargetAuthor Lynne Freeman

KEYWORD book

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

27.4459975

8.08502001 17.7655087

37.1264862

46.8069749

9.68048872

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Tracy Wolff book	370	787	47.0139771	^
2	Kami Garcia book	370	787	47.0139771	
					~

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD buck

Up to 2 Standard Deviations below Average Baseline Rate Lexical Overlap Rate above Average Baseline Rate

2.83333333

5.03383613

7.86716946

12.9010056

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

-7.23433892

-2.2005028

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Tracy Wolff buck	17	60	28.3333333	^
2	Becca Fitzpatrick buck	10	60	16.6666667	
					~

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Tracy Wolff Diego	16	21	76,1904762	^
					~

TargetAuthor Lynne Freeman

KEYWORD doorway

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

13.611691

1.47867993 7.54518548

19.6781966

25.7447021

6.06650555

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Tracy Wolff doorway	119	479	24.8434238	^
2	Kami Garcia doorway	109	479	22.7557411	
					~

TargetAuthor Lynne Freeman

KEYWORD dragon

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

1.8705036

-4.46333775 -1.29641708

above Average Baseline Rate

5.03742427 3.16692068 8.20434495

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 101 139 72.6618705 1 dragon

TargetAuthor Lynne Freeman

KEYWORD duck

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

13.7837838

-3.78930126 4.99724126

8.78654252

22.5703263 31.3568688

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 152 333 45.6456456 1 duck

Freeman 1

TargetAuthor Lynne Freeman

KEYWORD fang

CaseID

Up to 2 Standard Deviations Average Baseline Up to 2 Standard Deviations below Average Baseline Rate Lexical Overlap Rate above Average

Up to 2 Standard Deviations above Average Baseline Rate

12

4.70886076

-7.66648756 -1.4788134 10.8965349 17.0842091

6.18767416

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 218 395 55.1898734 1 fang

6.43488275

18.1515494

24.5864322

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

5.28178391

-1.15309884

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Tracy Wolff fist	285	600	47.5	^
					~

49.3376261

76.5441046

27.2064785

-5.075331

-32.2818095

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 763 1342 56.8554396 1 grin

.840864174

1.47970815

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

-1.07566774

-.43682377

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Tracy Wolff herbal	5	99	5.05050505	^
					~

16

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD jean

Up to 2 Standard Deviations below Average Baseline Rate Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

16.6104294

6.0930866 11.351758

21.8691009 5.25867142 27.1277723

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Tracy Wolff jean	166	652	25.4601227	^
2	Kami Garcia jean	157	652	24.0797546	
					~

21.9164376

26.813501

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

7.2252471

12.1223106

Comp	parison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
Trac	cy Wolff	641	1342	47,7645306	^
					~

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD monster

Up to 2 Standard Deviations below Average Baseline Rate Average Baseline Lexical Overlap Rate

Up to 2 Standard Deviations above Average Baseline Rate

9.22374429

-7.02780147 1.09797141

8.12577288

17.3495172 25.4752901

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 245 438 55.9360731 1 monster

19

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD moon

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

9.03409091

8.82933289

-8.62457487 .204758021

17.8634238

26.6927567

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Kami Garcia moon	479	1584	30.239899	^
2	Tracy Wolff moon	329	1584	20.770202	
					~

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Tracy Wolff mutation	4	27	14.8148148	^
					~

Freeman 1

TargetAuthor Lynne Freeman

KEYWORD northern

CaseID

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

.810810811

-1.87683494 -.533012062

1.34382287

2.15463368 3.49845656

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 25 148 16.8918919 1 northern

22

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD protector

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

.793650794

-2.56195725 -.884153227

1.67780402

2.47145481 4.14925883

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 32 189 16.9312169 1 protector

23

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD queen

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

6.44128114

-8.80344417 -1.18108152

7.62236265

14.0636438 21.6860064

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 151 281 53.7366548 1 queen

CaseID Freeman 1 **TargetAuthor** 

Lynne Freeman

**KEYWORD** selfish

Up to 2 Standard Deviations below Average Baseline Rate Average Baseline **Lexical Overlap Rate**  Up to 2 Standard Deviations above Average Baseline Rate

9.88095238

-6.84419069 1.51838085

18.2435239 8.36257153

26.6060955

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 28 84 33.3333333 1 selfish

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD stab

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

9.40983607

-.433755469 4.4880403

4.92179577

14.3316318 19.2534276

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate
Tracy Wolff stab	57	305	18.6885246

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD Stonehenge

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

.909090909

-4.84050484 -1.96570696

3.78388878 2.87479787 6.65868665

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 8 55 14.5454545 1 Stonehenge

6.00008414

11.9873453

17.9874294

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

-6.01290714

-.012822997

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Tracy Wolff tea	244	628	38,8535032	^
					<b>*</b>

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD teacher

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

13.6466165

5.508228

2.63016053 8.13838854

19.1548445

24.6630726

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 111 266 41.7293233 1 teacher

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD tree

Up to 2 Standard Deviations below Average Baseline Rate Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

25.4422604

6.15537368 15.7988171

9.64344338

35.0857038 44.7291472

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 410 814 50.3685504 1 tree

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD vampire

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

9.63104326

-14.2779202 -2.32343848

11.9544817

21.585525 33.5400067

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 490 786 62.3409669 1 vampire

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD waggle

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

.801886792

-2.6443442 -.921228703

2.52500229 1.7231155 4.24811778

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
Tracy Wolff waggle	43	212	20.2830189	

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD werewolf

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

6.73539519

-12.2503537 -2.75747928

9.49287447

16.2282697 25.7211441

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 229 582 39.347079 1 werewolf

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD wink

Up to 2 Standard Deviations below Average Baseline Rate Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

6.69724771

-3.24229591 1.7274759

11.6670195

16.6367913

4.96977181

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 254 545 46.6055046 1 wink

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD witch

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate Up to 2 Standard Deviations above Average Baseline Rate

6.00682594

-10.3942188 -2.19369642

8.20052236

14.2073483 22.4078707

Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

**Raw Count of** Raw Count of Comparison Target Author's Author's **Lexical Cluster Comparison Author's Comparison Author Lexical Overlap Terms Lexical Overlap Rate Tracy Wolff** 318 586 54.2662116 1 witch

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman

KEYWORD wolf

Up to 2 Standard Deviations below Average Baseline Rate

Average Baseline Lexical Overlap Rate

Up to 2 Standard Deviations above Average Baseline Rate

8.93828799

-21.710701 -6.38620649

24.2627825

39.5872769

15.3244945

# Comparison Authors Whose Lexical Overlap Rate is Up to 2 Standard Deviations above Average Baseline Rate

	Comparison Author	Raw Count of Comparison Author's Lexical Overlap	Raw Count of Target Author's Lexical Cluster Terms	Comparison Author's Lexical Overlap Rate	
1	Maggie Stiefvater wolf	729	1507	48.3742535	^
2	Tracy Wolff wolf	629	1507	41.7385534	
					~

Annex 3: ALIAS LexiLap Analysis Using Cosine Similarity

# **ALIAS Lexical Cluster Overlap Analysis using Cosine Similarity**

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword accident

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

# SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

## DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	0.09
Lynne Freeman	Aprilynne Pike	-0.05
Lynne Freeman	Becca Fitzpatrick	0.06
Lynne Freeman	Cassandra Clare	-0.04
Lynne Freeman	Kami Garcia	0.11
Lynne Freeman	Lauren Kate	0.11
Lynne Freeman	☐ Smith	-0.03
Lynne Freeman	Maggie Stiefvater	0.11
Lynne Freeman	Richelle Mead	0.09
Lynne Freeman	Stephanie Meyer	-0.02

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword Alaska

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

arget Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	
Lynne Freeman	Cassandra Clare	
Lynne Freeman	Kami Garcia	-0.11
Lynne Freeman	Lauren Kate	
Lynne Freeman	☐ Smith	
Lynne Freeman	Maggie Stiefvater	
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	0.18

CaseID

Freeman 1

TargetAuthor

**Lynne Freeman** 

Keyword

alien

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	Comparison Author	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	
Lynne Freeman	Cassandra Clare	-0.02
Lynne Freeman	Kami Garcia	0.14
Lynne Freeman	Lauren Kate	
Lynne Freeman	☐ Smith	-0.07
Lynne Freeman	Maggie Stiefvater	0.05
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	-0.11

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword aurora

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	
Lynne Freeman	Cassandra Clare	
Lynne Freeman	Kami Garcia	
Lynne Freeman	Lauren Kate	
Lynne Freeman	☐ Smith	
Lynne Freeman	Maggie Stiefvater	
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword blood

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.05
Lynne Freeman	Aprilynne Pike	0.05
Lynne Freeman	Becca Fitzpatrick	0.10
Lynne Freeman	Cassandra Clare	0.09
Lynne Freeman	Kami Garcia	0.17
Lynne Freeman	Lauren Kate	-0.11
Lynne Freeman	LI Smith	-0.02
Lynne Freeman	Maggie Stiefvater	0.09
Lynne Freeman	Richelle Mead	0.02
Lynne Freeman	Stephanie Meyer	0.02

CaseID

Freeman 1

**TargetAuthor** 

**Lynne Freeman** 

Keyword book

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

## DIFFERENCE

Target Author	<b>Comparison Author</b>	Cosine Similarity Score
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.02
Lynne Freeman	Aprilynne Pike	0.00
Lynne Freeman	Becca Fitzpatrick	0.10
Lynne Freeman	Cassandra Clare	0.00
Lynne Freeman	Kami Garcia	-0.06
Lynne Freeman	Lauren Kate	0.07
Lynne Freeman	LJ Smith	0.09
Lynne Freeman	Maggie Stiefvater	0.05
Lynne Freeman	Richelle Mead	-0.03
Lynne Freeman	Stephanie Meyer	0.05

CaseID

Freeman 1

**TargetAuthor** 

**Lynne Freeman** 

Keyword buck

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

arget Author	Comparison Author	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	0.12
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	-0.05
Lynne Freeman	Cassandra Clare	
Lynne Freeman	Kami Garcia	0.02
Lynne Freeman	Lauren Kate	0.03
Lynne Freeman	☐ Smith	
Lynne Freeman	Maggie Stiefvater	-0.04
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	-0.13

CaseID

Freeman 1

TargetAuthor

**Lynne Freeman** 

Keyword Diego

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	Comparison Author	Cosine Similarity Score
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	
Lynne Freeman	Cassandra Clare	-0.11
Lynne Freeman	Kami Garcia	
Lynne Freeman	Lauren Kate	
Lynne Freeman	⊔ Smith	
Lynne Freeman	Maggie Stiefvater	
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword doorway

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff
is compared to
the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors
using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

1.00
-0.05
-0.10
-0.13
0.17
-0.09
-0.08
-0.03
0.08
0.05
0.03

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword dragon

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	
Lynne Freeman	Cassandra Clare	0.10
Lynne Freeman	Kami Garcia	0.02
Lynne Freeman	Lauren Kate	
Lynne Freeman	☐ Smith	0.02
Lynne Freeman	Maggie Stiefvater	
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword duck

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	0.01
Lynne Freeman	Aprilynne Pike	-0.16
Lynne Freeman	Becca Fitzpatrick	0.02
Lynne Freeman	Cassandra Clare	0.01
Lynne Freeman	Kami Garcia	0.06
Lynne Freeman	Lauren Kate	-0.03
Lynne Freeman	☐ Smith	0.04
Lynne Freeman	Maggie Stiefvater	
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	-0.04

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword fang

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

arget Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.08
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	
Lynne Freeman	Cassandra Clare	-0.04
Lynne Freeman	Kami Garcia	
Lynne Freeman	Lauren Kate	
Lynne Freeman	☐ Smith	0.05
Lynne Freeman	Maggie Stiefvater	-0.00
Lynne Freeman	Richelle Mead	-0.02
Lynne Freeman	Stephanie Meyer	0.13

CaseID

Freeman 1

TargetAuthor

**Lynne Freeman** 

Keyword fist

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.06
Lynne Freeman	Aprilynne Pike	0.08
Lynne Freeman	Becca Fitzpatrick	-0.04
Lynne Freeman	Cassandra Clare	-0.15
Lynne Freeman	Kami Garcia	0.02
Lynne Freeman	Lauren Kate	-0.06
Lynne Freeman	LI Smith	0.08
Lynne Freeman	Maggie Stiefvater	0.04
Lynne Freeman	Richelle Mead	-0.14
Lynne Freeman	Stephanie Meyer	0.17

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword grin

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff
is compared to
the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors
using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Comparison Author	Cosine Similarity Score
Tracy Wolff	1.00
Alyson Noel	-0.07
Aprilynne Pike	-0.05
Becca Fitzpatrick	-0.00
Cassandra Clare	0.09
Kami Garcia	
Lauren Kate	0.00
⊔ Smith	-0.16
Maggie Stiefvater	0.05
Richelle Mead	-0.05
Stephanie Meyer	0.13
	Alyson Noel  Aprilynne Pike  Becca Fitzpatrick  Cassandra Clare  Kami Garcia  Lauren Kate  LJ Smith  Maggie Stiefvater  Richelle Mead

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword herbal

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	Comparison Author	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	
Lynne Freeman	Cassandra Clare	0.07
Lynne Freeman	Kami Garcia	
Lynne Freeman	Lauren Kate	
Lynne Freeman	☐ Smith	
Lynne Freeman	Maggie Stiefvater	
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword jean

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.04
Lynne Freeman	Aprilynne Pike	0.11
Lynne Freeman	Becca Fitzpatrick	-0.07
Lynne Freeman	Cassandra Clare	-0.04
Lynne Freeman	Kami Garcia	-0.11
Lynne Freeman	Lauren Kate	0.15
Lynne Freeman	☐ Smith	-0.00
Lynne Freeman	Maggie Stiefvater	0.02
Lynne Freeman	Richelle Mead	0.14
Lynne Freeman	Stephanie Meyer	0.07

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword kiss

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.02
Lynne Freeman	Aprilynne Pike	0.00
Lynne Freeman	Becca Fitzpatrick	0.06
Lynne Freeman	Cassandra Clare	0.11
Lynne Freeman	Kami Garcia	-0.05
Lynne Freeman	Lauren Kate	0.08
Lynne Freeman	☐ Smith	-0.02
Lynne Freeman	Maggie Stiefvater	-0.11
Lynne Freeman	Richelle Mead	-0.00
Lynne Freeman	Stephanie Meyer	0.05

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword monster

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

arget Author	<b>Comparison Author</b>	Cosine Similarity Score
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	0.01
Lynne Freeman	Aprilynne Pike	0.04
Lynne Freeman	Becca Fitzpatrick	-0.03
Lynne Freeman	Cassandra Clare	-0.07
Lynne Freeman	Kami Garcia	-0.07
Lynne Freeman	Lauren Kate	-0.04
Lynne Freeman	☐ Smith	
Lynne Freeman	Maggie Stiefvater	-0.22
Lynne Freeman	Richelle Mead	0.04
Lynne Freeman	Stephanie Meyer	-0.00

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword moon

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.07
Lynne Freeman	Aprilynne Pike	-0.09
Lynne Freeman	Becca Fitzpatrick	-0.03
Lynne Freeman	Cassandra Clare	0.11
Lynne Freeman	Kami Garcia	0.07
Lynne Freeman	Lauren Kate	0.09
Lynne Freeman	☐ Smith	0.14
Lynne Freeman	Maggie Stiefvater	-0.07
Lynne Freeman	Richelle Mead	-0.15
Lynne Freeman	Stephanie Meyer	-0.12

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword mutation

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	
Lynne Freeman	Cassandra Clare	
Lynne Freeman	Kami Garcia	
Lynne Freeman	Lauren Kate	
Lynne Freeman	☐ Smith	
Lynne Freeman	Maggie Stiefvater	
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword northern

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	Comparison Author	Cosine Similarity Score
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	
Lynne Freeman	Aprilynne Pike	-0.04
Lynne Freeman	Becca Fitzpatrick	-0.09
Lynne Freeman	Cassandra Clare	
Lynne Freeman	Kami Garcia	-0.05
Lynne Freeman	Lauren Kate	-0.04
Lynne Freeman	⊔ Smith	
Lynne Freeman	Maggie Stiefvater	
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword protector

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	
Lynne Freeman	Aprilynne Pike	-0.12
Lynne Freeman	Becca Fitzpatrick	
Lynne Freeman	Cassandra Clare	
Lynne Freeman	Kami Garcia	
Lynne Freeman	Lauren Kate	
Lynne Freeman	☐ Smith	
Lynne Freeman	Maggie Stiefvater	0.11
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword queen

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	0.11
Lynne Freeman	Aprilynne Pike	-0.12
Lynne Freeman	Becca Fitzpatrick	-0.06
Lynne Freeman	Cassandra Clare	0.08
Lynne Freeman	Kami Garcia	-0.14
Lynne Freeman	Lauren Kate	0.08
Lynne Freeman	☐ Smith	-0.08
Lynne Freeman	Maggie Stiefvater	
Lynne Freeman	Richelle Mead	-0.20
Lynne Freeman	Stephanie Meyer	0.03

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword selfish

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

#### SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

#### DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	0.06
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	-0.00
Lynne Freeman	Cassandra Clare	0.04
Lynne Freeman	Kami Garcia	
Lynne Freeman	Lauren Kate	-0.09
Lynne Freeman	☐ Smith	-0.05
Lynne Freeman	Maggie Stiefvater	-0.14
Lynne Freeman	Richelle Mead	-0.03
Lynne Freeman	Stephanie Meyer	-0.02

stab

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

# SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

# DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.01
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	0.05
Lynne Freeman	Cassandra Clare	-0.06
Lynne Freeman	Kami Garcia	0.04
Lynne Freeman	Lauren Kate	0.11
Lynne Freeman	☐ Smith	0.03
Lynne Freeman	Maggie Stiefvater	-0.13
Lynne Freeman	Richelle Mead	0.09
Lynne Freeman	Stephanie Meyer	0.12

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword Stonehenge

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

# SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

# DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	
Lynne Freeman	Cassandra Clare	
Lynne Freeman	Kami Garcia	
Lynne Freeman	Lauren Kate	
Lynne Freeman	☐ Smith	0.00
Lynne Freeman	Maggie Stiefvater	
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword tea

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

# SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

# DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.01
Lynne Freeman	Aprilynne Pike	-0.06
Lynne Freeman	Becca Fitzpatrick	0.04
Lynne Freeman	Cassandra Clare	-0.09
Lynne Freeman	Kami Garcia	0.05
Lynne Freeman	Lauren Kate	0.12
Lynne Freeman	☐ Smith	
Lynne Freeman	Maggie Stiefvater	-0.05
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword teacher

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

# SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

# DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.07
Lynne Freeman	Aprilynne Pike	0.16
Lynne Freeman	Becca Fitzpatrick	0.02
Lynne Freeman	Cassandra Clare	0.06
Lynne Freeman	Kami Garcia	0.02
Lynne Freeman	Lauren Kate	-0.04
Lynne Freeman	⊔ Smith	-0.15
Lynne Freeman	Maggie Stiefvater	0.09
Lynne Freeman	Richelle Mead	-0.06
Lynne Freeman	Stephanie Meyer	-0.09

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword tree

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

# SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

# DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.11
Lynne Freeman	Aprilynne Pike	-0.01
Lynne Freeman	Becca Fitzpatrick	-0.05
Lynne Freeman	Cassandra Clare	0.18
Lynne Freeman	Kami Garcia	0.11
Lynne Freeman	Lauren Kate	0.02
Lynne Freeman	☐ Smith	-0.07
Lynne Freeman	Maggie Stiefvater	0.10
Lynne Freeman	Richelle Mead	0.06
Lynne Freeman	Stephanie Meyer	-0.04

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword vampire

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

# SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

# DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.05
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	0.06
Lynne Freeman	Cassandra Clare	0.13
Lynne Freeman	Kami Garcia	0.01
Lynne Freeman	Lauren Kate	
Lynne Freeman	⊔ Smith	
Lynne Freeman	Maggie Stiefvater	
Lynne Freeman	Richelle Mead	0.07
Lynne Freeman	Stephanie Meyer	-0.11

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword waggle

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

# SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

# DIFFERENCE

arget Author	Comparison Author	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	-0.11
Lynne Freeman	Cassandra Clare	
Lynne Freeman	Kami Garcia	
Lynne Freeman	Lauren Kate	0.11
Lynne Freeman	☐ Smith	
Lynne Freeman	Maggie Stiefvater	
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword werewolf

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

# SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

# DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	0.05
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	
Lynne Freeman	Cassandra Clare	0.00
Lynne Freeman	Kami Garcia	-0.08
Lynne Freeman	Lauren Kate	
Lynne Freeman	☐ Smith	0.00
Lynne Freeman	Maggie Stiefvater	0.09
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	0.02

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword wink

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

# SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

# DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.02
Lynne Freeman	Aprilynne Pike	0.11
Lynne Freeman	Becca Fitzpatrick	-0.07
Lynne Freeman	Cassandra Clare	0.01
Lynne Freeman	Kami Garcia	-0.05
Lynne Freeman	Lauren Kate	0.02
Lynne Freeman	☐ Smith	-0.02
Lynne Freeman	Maggie Stiefvater	-0.04
Lynne Freeman	Richelle Mead	0.00
Lynne Freeman	Stephanie Meyer	0.09

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword witch

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

# SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

# DIFFERENCE

Target Author	Comparison Author	Cosine Similarity Score
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	0.07
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	0.04
Lynne Freeman	Cassandra Clare	0.07
Lynne Freeman	Kami Garcia	0.14
Lynne Freeman	Lauren Kate	0.15
Lynne Freeman	☐ Smith	-0.02
Lynne Freeman	Maggie Stiefvater	
Lynne Freeman	Richelle Mead	
Lynne Freeman	Stephanie Meyer	0.04

\_\_CaseID Freeman 1

TargetAuthor Lynne Freeman Keyword wolf

The vector space for this keyword lexical cluster for Lynne Freeman and Tracy Wolff is compared to the vector space for this keyword lexical cluster for Lynne Freeman and Baseline Authors using cosine similarity.

# SAMENESS

A cosine similarity score of 1 shows that clusters are the same: the LF\*TW cluster compared to itself is the same with a cosine similarity score of 1.

# DIFFERENCE

Target Author	<b>Comparison Author</b>	<b>Cosine Similarity Score</b>
Lynne Freeman	Tracy Wolff	1.00
Lynne Freeman	Alyson Noel	-0.05
Lynne Freeman	Aprilynne Pike	
Lynne Freeman	Becca Fitzpatrick	
Lynne Freeman	Cassandra Clare	-0.06
Lynne Freeman	Kami Garcia	-0.10
Lynne Freeman	Lauren Kate	
Lynne Freeman	☐ Smith	0.12
Lynne Freeman	Maggie Stiefvater	0.02
Lynne Freeman	Richelle Mead	-0.02
Lynne Freeman	Stephanie Meyer	0.01

# **Annex 4: Chapter Titles in Documentary Data**

# **ALYSON NOEL EVERMORE THE IMMORTALS**

# **CHAPTERS ARE ONLY NUMBERED, NOT TITLED**

**Chapter Number (One, Two, Three...)** 

**Aura Color Chart** 

Chapter One

**Chapter Two** 

Chapter Three

**Chapter Four** 

**Chapter Five** 

Chapter Six

Chapter Seven

**Chapter Eight** 

**Chapter Nine** 

Chapter Ten

Chapter Eleven

**Chapter Twelve** 

**Chapter Thirteen** 

Chapter Fourteen

Chapter Fifteen

Chapter Sixteen

Chapter Seventeen

Chapter Eighteen

**Chapter Nineteen** 

**Chapter Twenty** 

**Chapter Twenty-One** 

**Chapter Twenty-Two** 

Chapter Twenty-Three

**Chapter Twenty-Four** 

**Chapter Twenty-Five** 

**Chapter Twenty-Six** 

**Chapter Twenty-Seven** 

Chapter Twenty-Eight

**Chapter Twenty-Nine** 

**Chapter Thirty** 

Chapter Thirty-One

Chapter Thirty-Two

Chapter Thirty-Three

Chapter Thirty-Four

**Chapter Thirty-Five** 

**Chapter Thirty-Six** 

Chapter Thirty-Seven

# Chapter Thirty-Eight

# **APRILYNNE PIKE WINGS**

# **CHAPTERS ARE ONLY NUMBERED, NOT TITLED**

**Number (One Two, Three...)** 

One

Two

Three

Four

Five

Six

Seven

Eight

Nine

Ten

Eleven

Twelve

Thirteen

Fourteen

Fifteen

Sixteen

Seventeen

Eighteen

Nineteen

Twenty

Twenty-One

Twenty-Two

Twenty-Three

Twenty-Four

Twenty-Five

# BECCA FITZPATRICK THE HUSH HUSH SAGA BOOK 1

# **PROLOGUE IS TITLED**

# ALL BUT ONE CHAPTERS ARE ONLY NUMBERED; NOT TITLED CHAPTER WITH NUMERAL (1, 2, 3...)

Prologue: Loire Valley, France November 1565

Chapter 1: Coldwater, Maine Present Day

Chapter 2

Chapter 3

Chapter 4

Chapter 5

- Chapter 6
- Chapter 7
- Chapter 8
- Chapter 9
- Chapter 10
- Chapter 11
- Chapter 12
- Chapter 13
- Chapter 14
- Chapter 15
- Chapter 16
- Chapter 17
- Chapter 18
- Chapter 19
- Chapter 20
- Chapter 21
- Chapter 22
- chapter 22
- Chapter 23
- Chapter 24
- Chapter 25
- Chapter 26
- Chapter 27
- Chapter 28
- Chapter 29
- Chapter 30

# CASSANDRA CLARE CITY OF BONES

# CHAPTERS ARE NUMBERED AND TITLED

CHAPTER WITH NUMERAL WITH TITLE (1, 2, 3..)

- 1 Pandemonium
- 2 Secrets and Lies
- 3 Shadowhunter
- 4 Ravener
- 5 Clave and Covenant
- 6 Forsaken
- 7 The Five-Dimensional Door
- 8 Weapon of Choice
- 9 The Circle and The Brotherhood
- 10 City of Bones
- 11 Magnus Bane
- 12 Dead Man's Part
- 13 The Memory of Whiteness

- 14 The Hotel Dumort
- 15 High and Dry
- 16 Falling Angels
- 17 The Midnight Flower
- 18 The Mortal Cup
- 19 Abbadon
- 20 In Rats' Alley
- 21 The Werewolf's Tale
- 22 Renwick's Ruin
- 23 Valentine

# **LAUREN KATE FALLEN**

# **CHAPTERS ARE NUMBERED AND TITLED**

**Chapter Number (One, Two, Three...)** 

In The Beginning

Chapter One - Perfect Strangers

Chapter Two - Fit to Be Tied

Chapter Three - Drawing Dark

Chapter Four - Graveyard Shift

Chapter Five - The Inner Circle

Chapter Six - No Salvation

Chapter Seven - Shedding Light

Chapter Eight - A Dive too Deep

Chapter Nine - State of Innocence

Chapter Ten - Where There's Smoke

Chapter Eleven - Rude Awakening

Chapter Twelve - Into Dust

Chapter Thirteen - Touched At The Roots

Chapter Fourteen - Idle Hands

Chapter Fifteen - The Lions' Den

Chapter Sixteen - Hanging in the Balance

Chapter Seventeen - An Open Book

Chapter Eighteen - The Buried War

Chapter Nineteen - Out of Sight

Chapter Twenty - Daybreak

Epilogue: Two Great Lights

# KAMI GARCIA BEAUTIFUL CREATURES

# PROLOGUE IS TITLED

CHAPTERS ARE NUMBERED WITH DATE (MONTH.DAY) AND TITLED

Before: The Middle of Nowhere

9.02: Dream On

- 9.02: New Girl
- 9.02: A Hole in the Sky
- 9.11: Collision
- 9.12: Broken Glass
- 9.12: Greenbrier
- 9.12: The Sisters
- 9.14: The Real Boo Radley
- 9.15: A Fork in the Road
- 9.24: The Last Three Rows
- 10.09: Gathering Days
- 10.09: A Crack in the Plaster
- 10.09: The Greats
- 10.10: Red Sweater
- 10.13: Marian the Librarian
- 10.31: Hallow E'en
- 11.01: The Writing on the Wall
- 11.27: Just Your Average American Holiday
- 11.28: Domus Lunae Libri
- 12.01: It Rhymes with Witch
- 12.06: Lost and Found
- 12.07: Grave Digging
- 12.08: Waist Deep
- 12.13: Melting
- 12.16: When the Saints Go Marching In
- 12.19: White Christmas
- 1.12: Promise
- 2.04: The Sandman or Something Like Him
- 2.05: The Battle of Honey Hill
- 2.11: Sweet Sixteen
- 2.11: Lollipop Girl
- 2.11: Family Reunion
- 2.11: The Claiming
- 2.12: Silver Lining

# LJ SMITH THE VAMPIRE DIARIES THE AWAKENING CHAPTERS ARE NUMBERED (ONE, TWO, THREE...), NOT TITLED

Chapter One

**Chapter Two** 

**Chapter Three** 

**Chapter Four** 

**Chapter Five** 

Chapter Six

Chapter Seven

Chapter Eight

**Chapter Nine** 

Chapter Ten

Chapter Eleven

**Chapter Twelve** 

Chapter Thirteen

**Chapter Fourteen** 

Chapter Fifteen

**Chapter Sixteen** 

Chapter Seventeen

Chapter Eighteen

**Chapter Nineteen** 

**Chapter Twenty** 

Chapter Twenty-One

**Chapter Twenty-Two** 

**Chapter Twenty-Three** 

**Chapter Twenty-Four** 

**Chapter Twenty-Five** 

**Chapter Twenty-Six** 

**Chapter Twenty-Seven** 

**Chapter Twenty-Eight** 

**Chapter Twenty-Nine** 

**Chapter Thirty** 

Chapter Thirty-One

Chapter Thirty-Two

Chapter Thirty-Three

**Chapter Thirty-Four** 

**Chapter Thirty-Five** 

**Chapter Thirty-Six** 

Chapter Thirty-Seven

Chapter Thirty-Eight

**Chapter Thirty-Nine** 

**Chapter Forty** 

Chapter Forty-One

Chapter Forty-Two

Chapter Forty-Three

Chapter Forty-Four

Chapter Forty-Five

Chapter Forty-Six

Chapter Forty-Seven

Chapter Forty-Eight

**Chapter Forty-Nine** 

**Chapter Fifty** 

Chapter Fifty-One

Chapter Fifty-Two

Chapter Fifty-Three

Chapter Fifty-Four

Chapter Fifty-Five

Chapter Fifty-Six

Chapter Fifty-Seven

Chapter Fifty-Eight

Chapter Fifty-Nine

**Chapter Sixty** 

Chapter Sixty-One

Chapter Sixty-Two

Chapter Sixty-Three

**Chapter Sixty-Four** 

**Chapter Sixty-Five** 

**Chapter Sixty-Six** 

Chapter Sixty-Seven

# MAGGIE STIEFVATER SHIVER THE WOLVES OF MERCY FALLS CHAPTERS ARE CHAPTERS ARE NUMBERED (ONE, TWO, THREE ) AND TITLED WITH CHARACTER NAME AND TEMPERATURE, e.g Grace 15°

Chapter One

**Chapter Two** 

**Chapter Three** 

**Chapter Four** 

Chapter Five

**Chapter Six** 

**Chapter Seven** 

**Chapter Eight** 

**Chapter Nine** 

Chapter Ten

Chapter Eleven

**Chapter Twelve** 

Chapter Thirteen

Chapter Fourteen

Chapter Fifteen

**Chapter Sixteen** 

Chapter Seventeen

Chapter Eighteen

**Chapter Nineteen** 

**Chapter Twenty** 

**Chapter Twenty-One** 

**Chapter Twenty-Two** 

Chapter Twenty-Three

**Chapter Twenty-Four** 

**Chapter Twenty-Five** 

**Chapter Twenty-Six** 

**Chapter Twenty-Seven** 

**Chapter Twenty-Eight** 

**Chapter Twenty-Nine** 

**Chapter Thirty** 

Chapter Thirty-One

Chapter Thirty-Two

Chapter Thirty-Three

**Chapter Thirty-Four** 

**Chapter Thirty-Five** 

**Chapter Thirty-Six** 

Chapter Thirty-Seven

Chapter Thirty-Eight

**Chapter Thirty-Nine** 

**Chapter Forty** 

Chapter Forty-One

Chapter Forty-Two

Chapter Forty-Three

**Chapter Forty-Four** 

Chapter Forty-Five

Chapter Forty-Six

Chapter Forty-Seven

Chapter Forty-Eight

**Chapter Forty-Nine** 

**Chapter Fifty** 

Chapter Fifty-One

Chapter Fifty-Two

Chapter Fifty-Three

Chapter Fifty-Four

Chapter Fifty-Five

**Chapter Fifty-Six** 

Chapter Fifty-Seven

Chapter Fifty-Eight

Chapter Fifty-Nine

**Chapter Sixty** 

Chapter Sixty-One

Chapter Sixty-Two

Chapter Sixty-Three

**Chapter Sixty-Four** 

Chapter Sixty-Five

**Chapter Sixty-Six** 

Prologue

# Chapter One

# RICHELLE MEAD VAMPIRE ACADEMY CHAPTERS ARE NUMBERED (ONE, TWO, THREE), NOT TITLED

**Chapter One** 

**Chapter Two** 

Chapter Three

**Chapter Four** 

**Chapter Five** 

**Chapter Six** 

Chapter Seven

**Chapter Eight** 

**Chapter Nine** 

Chapter Ten

Chapter Eleven

**Chapter Twelve** 

**Chapter Thirteen** 

Chapter Fourteen

Chapter Fifteen

**Chapter Sixteen** 

Chapter Seventeen

Chapter Eighteen

**Chapter Nineteen** 

**Chapter Twenty** 

Chapter Twenty-One

**Chapter Twenty-Two** 

**Chapter Twenty-Three** 

**Chapter Twenty-Four** 

# STEPHANIE MEYER TWILIGHT SAGA CHAPTERS ARE NUMBERED (1, 2, 3) AND TITLED

- 1. FIRST SIGHT
- 2. OPEN BOOK
- 3. PHENOMENON
- 4. INVITATIONS
- 5. BLOOD TYPE
- 6. SCARY STORIES
- 7. NIGHTMARE
- 8. PORT ANGELES
- 9. THEORY
- **10. INTERROGATIONS**

- 11. COMPLICATIONS
- 12. BALANCING
- 13. CONFESSIONS
- 14. MIND OVER MATTER
- 15. THE CULLENS
- 16. CARLISLE
- 17. THE GAME
- 18. THE HUNT
- 19. GOODBYES
- 20. IMPATIENCE
- 21. PHONE CALL
- 22. HIDE-AND-SEEK
- 23. THE ANGEL
- 24. AN IMPASSE

**EPILOGUE: AN OCCASION** 

# **TRACY WOLFF**

### **CRAVE**

# **CHAPTERS ARE NUMBERED AND TITLED**

### **NUMERAL TITLE**

- 00 If You're Not Living on the Edge, You're Taking Up Too Much Space
- 01 Landing Is Just Throwing Yourself at the Ground and Hoping You Don't Miss
- 02 Just Because You Live in a Tower Doesn't Make You a Prince
- 03 Vampire Queens Aren't the Only Ones with a Nasty Bite
- 04 Shining Armor Is So Last Century
- 05 Things Hot Pink and Harry Styles Have in Common
- 06 No, I Really Don't Want to Build a Snowman
- 07 Something Really Freaking Wicked This Way Comes
- 08 Live and Let Die
- 09 Even Hell Has its Factions
- 10 Turns Out the Devil Wears Gucci
- 11 In the Library, No One Can Hear You Scream
- 12 It's All Fun and Games Until Someone Loses Their Life
- 13 Just Bite Me
- 14 Knock, Knock, Knocking on Death's Door
- 15 So Hell Actually Can Freeze Over
- 16 Sometimes Keeping Your Enemies Close Is the Only Thing that Prevents Hypothermia
- 17 It's Discretion, not Diamonds, That's a Girl's Best Friend
- 18 How Many Hot Guys Does it Take to Win a Snowball Fight?
- 19 We Came, We Fought, I Froze
- 20 There's Never a Parachute Around When You Need One
- 21 I Like Standing on My Own Two Feet, but Getting Swept Off Them Feels Surprisingly Good, Too

- 22 Baby, It's Hot in Here...
- 23 Never Bring an Ice Cream Scoop to a Gun Fight
- 24 Waffles Are the Way to a Girl's Everything
- 25 Truly, Madly, Deeply Bitten
- 26 The Uniform Doesn't Make the Woman, But it Sure Does Bring Out the Insecurities
- 27 Ten-Degree Weather Gives a Whole New Meaning to the Cool Kids' Table
- 28 "To Be or Not to Be" Is a Question, Not a Pickup Line
- 29 With Friends Like These, Everyone Needs Hard Hats
- 30 You Make the Earth Shake Under My Feet...and Everywhere Else, Too
- 31 Big Girls Don't Cry (Unless They Want To)
- 32 It's Not a Coincidence that Denali and Denial Use All the Same Letters
- 33 Madonna's Not the Only One with a Lucky Star
- 34 All's Fair in Love and Earthquakes
- 35 Baked Alaska Is More than Just a Yummy Dessert
- 36 No Harm, All Foul
- 37 Don't Ask the Question if You Can't Handle the Answer
- 38 Nothing Says "I Like You" Like a Fang to the Throat
- 39 There's Never a Hallucinogen Around When You Need One
- 40 Be Careful What You Witch For
- 41 Vampires, Dragons, and Werewolves, Oh My!
- 42 Good Thing Pancakes Aren't on Today's Menu
- 43 What Doesn't Kill You Still Scares the Hell Out of You
- 44 Sweet Home Alaska
- 45 I Always Knew There Was Fire Between Us; I Just Didn't Realize it Was Your Breath
- 46 I'll Get You and Your Little Dog, Too
- 47 The First Bite Is the Deepest
- 48 Is That a Wooden Stake in Your Pocket or Are You Just Happy to See Me?
- 49 Eventually the World Breaks Everyone
- 50 He Who Lives in Stone Towers Should Never Throw Dragons
- 51 Trial by Dragon Fire
- 52 If You Can't Live Without Me, Why Aren't You Dead Yet?
- 53 If This Kiss Is Going to Start a War, it May as Well Be Worth It
- 54 What Could Possibly Be More Interesting than Kissing Me?
- 55 No Use Crying Over Spilled Tea
- 56 Vampire Girl Gone Wild
- 57 Double, Double, Toil and a Whole Lot of Trouble
- 58 Never Do a Trust Fall with Someone Who Can Fly
- 59 Carpe Kill-Em
- 60 Some Call it Paranoia, But I Call it an Evil Bitch Trying to Use You as a Human Sacrifice
- 61 Sticks and Stones May Break Your Bones, but Vampires Will Kill You
- 62 Where There's Smoke, There's a Dead Vampire
- 63 A Bite to Remember
- 64 All's Well that Ends with Marshmallows
- 65 Why Can't a Girl Just Have an Ordinary HEA These Days?

- 00 She Persisted —Jaxon—
- 01 You Only Think You're a Prince If You Don't Have a Tower—Jaxon—
- 02 It Only Takes One Hot Vampire to Win a Snowball Fight—Jaxon—
- 03 If You Want to Feel Better, Never Ask an Evil Vampire a Question—Jaxon—

# **CRUSH**

# CHAPTERS ARE NUMBERED AND TITLED NUMERAL TITLE

- 01 Woke Up Like This
- 02 So...What Did I Miss?
- 03 Sleeping Beauty's Got Nothing on Me
- 04 Turns out the Sixth Sense Is Actually Human Sacrifice
- 05 Gargoyles Are the New Black
- 06 Vampire Roulette Isn't the Same Without the Blood
- 07 What I Don't Know Will Hurt Me...and Everyone Else
- 08 Put a Little Love on Me
- 09 Livin' on a Hope-Induced Hallucination
- 10 One Giant Pain in my Ass
- 11 Just Call Me Stone-Coldhearted
- 12 #FactionFightClub
- 13 Sucker Punch Me One More Time
- 14 She-Nanigans
- 15 Let's All Play Find the Homicidal Maniac
- 16 Nothing Wrong with Being a Little Horny
- 17 Tunnel Vision
- 18 I Think I Had Amnesia Once...or Twice
- 19 Caught Red-Handed
- 20 Karma's a Witch's Cousin
- 21 Keep Your Enemies Close, Unless They Bleed a Lot
- 22 Family Is My Favorite F-Word
- 23 Saturday Morning Cartoons Never Prepared Me for This
- 24 Go Smudge Yourself
- 25 And the Blackouts Just Keep on Coming
- 26 Possession Is Nine-Tenths of the Law
- 27 When the Evil Within Really Needs to be the Evil That's Out, Out, Out
- 28 Sometimes Girls Just Wanna Take Charge
- 29 I'm Too Sexy for My Coat...and So Is Everyone Else
- 30 Winner Winner Bloodletter's Dinner
- 31 Welcome to the Ice Age
- 32 One Person's Reality Is Another Person's Total Mind F\*ck
- 33 It's Hard to Pick My Battles When My Battles Keep Picking Me
- 34 This Place Isn't Big Enough for the Both of Us
- 35 I'm Going to Wash That Psychopath Right Out of My Hair

- 36 DIY Exorcism
- 37 Sweet Dreams Are Made of Anything But This
- 38 Take Me Under Your Dragon Wing
- 39 Salem WTF Trials
- 40 Survival Is So Last Year
- 41 Turns Out the Devil Wears Armani
- 42 Ben & Jerry Are the Only Two Guys I Want to Fight Over
- 43 Even Homicidal Maniacs Have Their Limits
- 44 Two Heads Aren't Better than One
- 45 Leave Your Daddy Issues at the Door
- 46 Gargoyles Need a Little Glamour, Too
- 47 Are you Bloodstoned?
- 48 Win, Lose, or Die
- 49 Teamwork Makes the Dream Work...(or it Gives You Nightmares)
- 50 It's Getting Crowded Under the Bed
- 51 Get Your Magic On
- 52 Come on Baby, Light My Candle
- 53 Everybody Wants to Rule the World
- 54 Who Needs a Magic Carpet When Your Bestie's a Dragon?
- 55 Ain't Nothing but a Wing Thing
- 56 Just Shut Up and Dance
- 57 Pulling all the (Heart) Strings
- 58 Always Look on the Bite Side
- 59 Two Vampires Too Many
- 60 Paranormal Telenovelas Are a Lifestyle Choice
- 61 The Monster Mash-Up
- **62 Gravity Bites**
- 63 There Aren't Enough Happy Thoughts in the World
- 64 Pardon My Existential Crisis
- 65 No Exit: A Biography
- 66 Frenemies Are Forever
- 67 Talk Darcy to Me
- 68 The Truth Hurts
- 69 To Bite or Not to Bite
- 70 When the Devil Comes Up to Denali
- 71 Revenge of the Body Snatched
- 72 Welcome to the Paranormal Jungle
- 73 Live and Let Love
- 74 A Whole New Kind of March Madness
- 75 Now You See Me, Now You Don't
- 76 From Jock to Cock-a-Doodle-Doo
- 77 Comet Me, Baby
- 78 Talk About a Bone to Pick
- 79 Talk About a Trust Fall

- 80 A Gargoyle's Guide to Antigravity
- 81 One Hundred Percent That Witch
- 82 Ride or Die
- 83 Sometimes Homecoming Really Does Mean Coming Home
- 84 Two Vampires, a Witch, and a Werewolf Walk into a Boneyard...
- 85 Dust and Dragon Bones
- 86 Grace Under Fire
- 87 All the Right Moves
- 88 Subconsciously Yours
- 89 Bend Till You Break
- 90 Fire and Bloodstone
- 91 Family Feud Has Nothing on Us
- 92 Is It Really a Throw Down if it Makes You Want to Throw Up?
- 93 Betrayal Is a Four-Letter Word
- 94 Some Days the Glass Really Is Half Empty
- 95 Second Star to the Right and Straight On Till Siberia
- 96 Get Fanged
- 97 Another One Bites the Dust
- 98 Fly by Night
- 99 With Baited Breath
- 100 Carpe Slay-Em
- 101 Heaven on My Mind
- 102 We Are the Monsters
- 103 Going Through the Potions
- 104 Because We Could Not Stop for Death
- 105 Fall from Grace
- 106 Stone Hearts Can Be Broken
- 107 I Never Asked for This Anyway
- 108 Pom-Poms and Pompadours
- 109 Where Do Broken Bonds Go?
- 110 Heeeeeeeeere's Hudson
- 111 Talk About a Power Trip
- 112 It's High Noon and Justice Doesn't Serve Itself
- 113 A Match Played in Hell
- 114 Fake It Till You Break It
- 115 He Totally Deserved That
- 116 Death By Ice Cube Is No Way to Start an Obituary
- 117 Raining Cats and Dragons
- 118 Stop Dragon my Wings Around
- 119 Gargoyle Girls Do It with Grace
- 120 Fee, Fi, Fo, F\*ck
- 121 And the Crowd Goes Wild
- 122 You're So Jelly
- 123 It All Comes Crashing Down

- 124 Long Time, No Sea
- 125 Between a Rock and a Hard Place
- 00 Amazing Grace—Hudson—
- 01 Didn't Want to Wake Up Like This—Hudson—
- 02 They Can All Kiss My Ass—Hudson—

# **COVET**

# **CHAPTERS ARE NUMBERED AND TITLED**

# **NUMERAL TITLE**

- 00 Life After Death
- 01 Check Your Mate
- 02 My Achy Breaky Bond
- 03 Keep Calm and Wingo On
- 04 Wednesday, Bloody Wednesday
- 05 Stale Mate
- 06 A Tale of Two Vegas
- 07 I Think I Missed the Punch Line
- 08 Ghosts Don't Need Moving Vans and Neither Does My Baggage
- 09 Me and My Unmentionables
- 10 A New Bond Experience
- 11 Badass Boys Are the Best Boys
- 12 Eternal Ambivalence of the Spotless Mind
- 13 Antisocial Influencer
- 14 Talk to the Stone
- 15 A Little Thread-to-Thread Competition
- 16 You Can Run but You Can't Hide
- 17 Mixed Messages
- 18 In a Class of Their Own
- 19 Misery Hates Company
- 20 The Joke's on You
- 21 I Hate What You've Done with the Place
- 22 WanderLUST
- 23 Live and Let Fly
- 24 Beauty and All the Beasts
- 25 Follow the Blood-Soaked Road
- 26 Why Can't You B Positive?
- 27 Lies that Bind
- 28 Today's Forecast: A Deep Freeze
- 29 Less Grandmother and More Grand Master
- 30 Who Needs Plausible as Long as You've Got Deniability?
- 31 I've Got to See a Man About a Beast
- 32 Hello, Is it Brie You're Looking For?

- 33 Netflix and No Chill
- 34 And You Thought You Had Daddy Issues
- 35 Fee-Fi-Phobia
- 36 Like a Monster to a Flame
- 37 Charmed, I'm Shore
- 38 Promises Made, Promises Broken
- 39 Not Every Dog Has Its Day
- 40 Fight or Fright Club
- 41 C'est La Vamp
- 42 It's Not the Tower That Makes the Prince
- 43 My Grace
- 44 Even If It's Broke, Don't Fix It
- 45 When the Going Gets Cuffed, the Cuffed Get Going
- 46 Cats Aren't the Only Ones with Nine Lives
- 47 With Enemies Like These, Who Needs Friends?
- 48 Honesty Is the Most Uncomfortable Policy
- 49 Bite the Big One
- 50 So Down-to-Earth
- 51 A Cut Above the Rest
- 52 AncesTREE
- 53 Bright Lights, Biggest City
- 54 Knock-Knock, Who's There?
- 55 Forged in Fire
- 56 A Giant Little Crush
- 57 When I Asked for a Ring, I Just Meant on the Phone
- 58 Only Fools and Vampires Rush In...
- 59 Leaf Me Alone
- 60 A Fate Worse than Death
- 61 With This Ring
- 62 I'll Be Watching You
- 63 I'm Rooting for You
- 64 Pin the Tail on the Dragon
- 65 A Little Less Talk, a Lot More Action
- 66 It Turns Out Diamonds Might Be a Girl's Best Friend After All
- 67 Who Needs Enchiladas When You Can Have the Whole Chimichanga?
- **68 Gone Courting**
- 69 Falling From Grace
- 70 Home-Port Advantage
- 71 If All Hell Breaks Loose, Why Can't We?
- 72 Cuff Me Not
- 73 I'm Not Buying What You're Celling
- 74 Past Really Is Prologue
- 75 Ditto
- 76 All Keyed Up

- 77 Where There's a Witch, There's a Way
- 78 Dungeons and Dragons: The Grace-Loses-Her-Shit Edition
- 79 Ball Gown Blues
- 80 Armani Make You Mine
- 81 Turns Out Cupid Is Packing a Lot More than Arrows
- 82 The Old Ball Gown and Chain
- 83 To Hoard or Not to Hoard... Asked Nobody Ever
- 84 Slow Hands Are Good, But Sometimes Fast Hands Are Even Better
- 85 Of Bites and Bonds
- 86 Kiss and TED Talk
- 87 When All the Feels Are a Few Too Many
- 88 The Same Kind of Stardust
- 89 The Big Apple Bites Back
- 90 The Sky's the Limit
- 91 Up Broadway Is the New Off Broadway
- 92 Everything's Up in the Air
- 93 Existential Crises Aren't All They're Cracked Up to Be
- 94 All That's Sugar Is Not Sweet
- 95 Love, Hate, and All the Grace
- 96 Balance Beams Aren't Just for Gymnasts... But They Should Be
- 97 My Enemy's Enemy Is Still Sketchy as F\*ck
- 98 Hope Blooms Eternal
- 99 Blood Isn't Thicker than Water
- 100 Humpty Dumpty Got Nothing on Us
- 101 Un-Break My Heart
- 102 Hot Pink Is HereditaryAfter All
- 103 With a Lot of Help From My Friends
- 104 Carpe Seize-Em
- 105 If You Lay Down with \*ssholes, You'll Wake Up Completely Screwed
- 106 There's Never a Pair of Ruby Slippers Around When You Need Them
- 107 Un-Solitary Confinement
- 108 War-Locked Up
- 109 A Charmer, a Bad Boy, and a Lost Soul All Walk into a Cell...
- 110 The Big Not-So-Easy
- 111 I Never Asked to Be Your Saving Grace...But Someone's Got to Do It
- 112 Warlocks Spell It Like It Is
- 113 Come On, Baby, Cuff Me One More Time
- 114 How A Prison Cell Became the Room Where It Happens
- 115 How Can You Tell the Future if There's No Future to Tell?
- 116 The Price Is Fright
- 117 Hell Hath No Fury Like a Prison Scorned
- 118 Long Time Gone From Grace
- 119 Big Stick Energy
- 120 Why Turn the Other Cheek When You Can Smack It?

- 121 It's Only a Food Fight if the Food Fights Back
- 122 What the Hex?
- 123 Hex This
- 124 Is It Still Russian Roulette if the Gun Is Fully Loaded?
- 125 At the End of My String
- 126 I Love You to Death (Whether I Want To or Not)
- 127 If You Can't Stand the Heat, Stay out of the Hellscape
- 128 Now You Kill Me, Now You Don't
- 129 Some Days Life's a Bowl of Cherries; Some Days It's Just the Pits
- 130 Fortune Favors the Trolled
- 131 Lost and Bound
- 132 Chains Aren't the Only Things Getting Broken
- 133 Everyone's Got a Little Skin in the Game
- 134 I'm Wearing a Lot More than a Heart on My Sleeve
- 135 Punch Drunk
- 136 Talk About a Giant Temper Tantrum
- 137 The River Stick-It-to-Ya?
- 138 Déjà Doomed
- 139 There's Never a Slingshot Around When You Need It
- 140 The Bigger They Are, the Harder I Bawl
- 141 Not-So-Amazing Grace
- 142 A Little Fight Left in Me
- 143 Hit Them with My Best Shot
- 144 In One Ear and Out the Other
- 145 Never Bet Against the Louse
- 146 Hide-and-Sneak
- 147 Totally Lit
- 148 Every Little Thing He Does Is Magic
- 149 The Fragile and the Sweet
- 150 I've Got Friends in Eerie Places
- 151 Not Every Island Is a Fantasy
- 152 Armageddon Me Out of Here
- 153 With Grace Power Comes Grace Responsibility
- 154 Till Death Do Us Part
- 155 I Never Promised You Forever
- 156 Talk About a Dustup
- 157 All the Broken Pieces
- 158 Cross My Heartstone
- 159 On a Wing and a Prayer
- 160 Ill-Gotten Chains
- 161 Crown Your Sorrows
- 0 You Really Can't Go Home Again —Hudson—
- Blood Really Is Thicker than Water Hudson—
- Blood Brothers —Hudson—

# **COURT**

# CHAPTERS ARE NUMBERED AND TITLED NUMERAL TITLE

- O Fake It Till It Breaks You—Hudson—
- 1 Sometimes Two Rights Make One Very Big Wrong
- 2 Standoff and Deliver
- 3 One Hell of a Bloodside Manner
- 4 Too Close for Closure
- 5 Dream a Little Scream of Me
- 6 Snap, Crackle, and Pop-Tart
- 7 Say What?
- 8 A Full-Court Mess
- 9 Does Google Translate Speak Gargoyle?
- 10 Rock My World
- 11 Light as a Feather, Hard as a Stone
- 12 A Whole Lot of Rock and a Little Bit of Roll
- 13 Time's Not the Only Thing That's Warped
- 14 We Have to Stop Bleeding This Way
- 15 Et Tu, Marise?
- 16 Every Wolf Has Their Day
- 17 Not All Dogs Go to Heaven
- 18 Everybody Needs a Little Push Sometimes
- 19 Taste the Rainbow
- 20 Bringing Down the House
- 21 Never Bite the Vamp Who Feeds You
- 22 All Bark, Extra Bite
- 23 All the Show, None of the Tell
- 24 It's Not a Deal if You Don't Want It
- 25 No GPS for the Not-So-Wicked
- 26 A Long Game of Hide-and-Weep
- 27 Country Roads Take Me Where?
- 28 Irish Luck Be a Lady Tonight
- 29 Passed with Flying Dragons
- 30 Talk About a Fixer-Upper
- 31 This Little Lighthouse of Mine
- 32 I Just Want to Power Down
- 33 Sometimes the Coffee Breaks You
- 34 (Green) String Theory
- 35 Buckle Up, Buttercup
- 36 You Bring Out the TNT in Me
- 37 More Like Tickety Boo-Boo
- 38 Divide and Get Conquered

- 39 It Sucks to Not Suck You Anymore
- 40 My, What Big Fangs You Have
- 41 Don't You Mean Darth Madar?
- 42 I Don't Think There's a Chromosome for This
- 43 Mommy Not So Dearest
- 44 The OMG OG
- 45 You Can Pick Your Friends but You Can't Pick Your Poison
- 46 The Thanksgiving Guest List Just Got Chaotic
- 47 Try to Seed It My Way
- 48 All the Strings Attached
- 49 Bravely Going Where No Icicle Has Gone Before
- 50 Life's a Beach, or Is It Just a B\*tch?
- 51 A Stitch in Time Saves My A\$\$
- 52 Big Bang Me
- 53 Shoppe Till You Drop
- 54 Not So Laffy Taffy
- 55 I A-Door You
- 56 Trial by Misfire
- 57 Dead If We Do, Dead If We Don't
- 58 The Walk of Hell Yeah I Did
- 59 The Old Bait-and-Ditch
- 60 Kicked to the Curb Appeal
- 61 Why So Crypt-ic?
- 62 Knife to Meet You
- 63 Dungeons and Daggers
- 64 Father Doesn't Know Best
- 65 You Say Potato, I Say Murdering Thief
- 66 This Is What it Really Means to Go Medieval
- 67 Liar, Liar, Chest on Fire
- 68 There Really Are Some Things You Can't Get Online
- 69 The One Where Everyone Might Die
- 70 Shake, Rattle, and Run Like Hell
- 71 The Frozen Court Never Bothered Me Anyway
- 72 Take It with a Block of Salt
- 73 Death by Taffeta
- 74 Chamber Absolutely Nots
- 75 Eat, Drink, and Be Wary
- 76 Why You Wanna Give Me the Runaround?
- 77 It's a Double-Edged Broadsword
- 78 Catwalk This Way
- 79 Finders, Keepers, Losers, Creepers
- 80 Whisper Sweet Not-So-Nothings
- 81 Welcome to the Danger Bones
- 82 Not Your Beck-and-Call Boy

- 83 A Mate with Destiny
- 84 The Slingshot Heard Round the World
- 85 Who Needs Chemistry When You've Got Physics?
- 86 Rock, Fang, Scissors
- 87 Knife First, Think Later
- 88 Nothing Says I Love You Like a Dagger to the Heart
- 89 Out with the Old, In with the Clue
- 90 There's Cliffhangers and then There's Cliff Hangers
- 91 Below the Age of Descent
- 92 Tomb of Doom
- 93 Drink Me, Baby, One More Time
- 94 Searching for a State of Grace
- 95 Some Like It Hot—Really Hot
- 96 Talk About a Dead Ringer
- 97 Way Too Close a Shave and a Haircut
- 98 Time and Tide Wait for No Man...Or Do They?
- 99 The Softer Side of Stone
- 100 No Time Like the Not-So-Present
- 101 Bewitched and Bedazzled
- 102 On a Ring and a Prayer
- 103 A Very Untasty Freeze
- 104 Of War and Wankers
- 105 Just a Little In and (Sh)Out
- 106 Out of the Fire, Into the Jail Cell
- 107 Hailing All the Marys
- 108 Hell Hath No Fury Like a Vampire Scorned
- 109 It's In the Demigod DNA
- 110 The Nearest Existential Crisis May Be Behind You
- 111 I Hate to Kidnap and Run
- 112 You Can Never Go Home Again
- 113 Memory Lane Is a Road in Hell
- 114 Choose Your Delusions
- 115 Epic Girl Battle: Wings vs. Fangs
- 116 The Difference Is Knife and Day
- 117 Hair Today, Gone Tomorrow
- 118 Hugs and Curses
- 119 Nothing Is Set in Stone, Even a Gargoyle
- 120 The Rune Where It Happened
- 121 Die on the Dotted Line
- 122 I Bet You Think This Fight Is About You
- 123 Here Goes Nothing
- 124 One Good Turn Deserves Another and Another and Another
- 125 We're Gonna Rock Around the Block Tonight
- 126 Riddle Me Once, Shame on You

- 127 The Writhing's on the Wall
- 128 Share the DEETs
- 129 Throwing all the Shade
- 130 Birds of a Feather Kill Together
- 131 Slip 'N Slime
- 132 Drinking Outside the Juice Box
- 133 I'd Love to Give Away My Shot
- 134 Close Your Eyes and Hot-Pink of England
- 135 Ee I Ee I Oh No
- 136 Moonwalk-a-Doodle-Doo
- 137 Give Me a Sand
- 138 A Nightmare to Remember
- 139 This May Be the Rune of Me
- 140 A Rune of One's Own
- 141 No Skin in the Game
- 142 Stop Dying Through Your Teeth
- 143 Ring Around the Not-So-Rosie
- 144 You Really Want a Pierce of Me?
- 145 Death and Dis-Ordered
- 146 Any Portal in a Storm
- 147 This Doesn't Wing True
- 148 No Time to Kill
- 149 Lots of Tears for Fears
- 150 When Your Learning Curve Is a D-Cup
- 151 Blood Mooning Over Me
- 152 Plan A, Plan B, Plan See-If-We-All-Die
- 153 If Wishes Were Roller Coasters, Gargoyles Would Ride
- 154 Imagine Dragons
- 155 Some Things You Just Can't Force Field
- 156 Double, Double, Boil and Trouble
- 157 Up, Up, and Get Away
- 158 Get Back in Your (Rib) Cage
- 159 Loyalty Always Was My Best Color
- 160 Parting Is Such Sweet Sorrow
- 161 Poof, There It Is!
- 162 Losing Everything but My Train of Thought
- 163 Rage Against the God Machine
- 164 What Doesn't Cyrus Makes Us Stronger
- 165 Fake Gods and Very Real Monsters
- 166 Carpe Queen 'Em
- 167 You're So Vine
- 168 Sometimes Lightning Strikes Twice
- 169 I Did It My Way
- 170 Girlboss

171 All Guts, No Glory
172 Shoulda Put a Crown on It
173 I'll Take the Check Mate
174 All Queened Up
175 "The End" Game
Epilogue —Hudson—Coup de Grace Three months later
To Your Heart's Malcontent—Hudson—
Right Into the Danger Zone—Hudson—

# EARLY 120 PAGE VERSION EARLY 147 PAGE VERSION

# LYNNE FREEMAN

# BLUE MOON RISING 2010 DEC CHAPTERS ARE NUMBERED (ONE, TWO, THREE), NOT TITLED

Chapter One

Chapter Two

••••

Chapter Forty-Nine

# BLUE MOON RISING 2011 CHAPTERS ARE NUMBERED (ONE, TWO, THREE), NOT TITLED

Chapter One

Chapter Two

....

Chapter Fifty-Four

# MASQUED 2012 CHAPTERS ARE NUMBERED (ONE, TWO, THREE), NOT TITLED

Prologue

**Chapter One** 

**Chapter Two** 

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Chapter Fifty-Seven

MASQUED 2013 APRIL
PROLOGUE 1 IS TITLED
PROLOGUE 2 IS NOT TITLED
CHAPTERS ARE NUMBERED (ONE, TWO, THREE), NOT TITLED

**Tarot Cards** 

Prologue

**Chapter One** 

**Chapter Two** 

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**Chapter Forty-Six** 

MASQUED 2014
PROLOGUE IS TITLED
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**Tarot** 

Chapter One

**Chapter Two** 

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**Chapter Forty-Nine** 

MASQUED 2016
PROLOGUE IS TITLED
CHAPTERS ARE NUMBERED (ONE, TWO, THREE), NOT TITLED

**Tarot** 

**Chapter One** 

**Chapter Two** 

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Chapter Eleven